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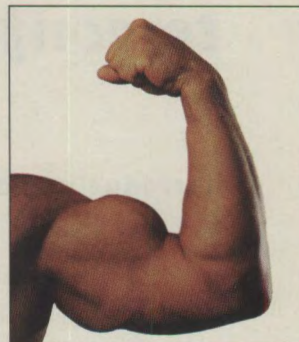
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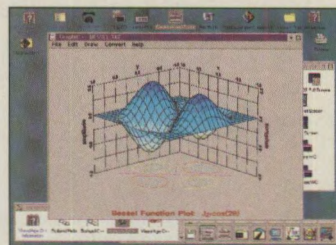
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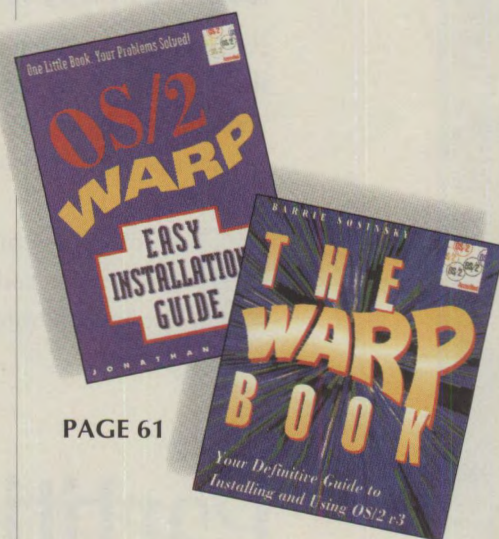
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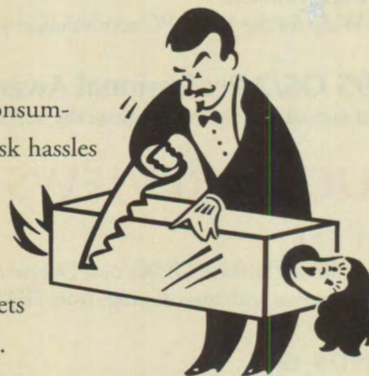
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COVER DESIGN:
SUSAN V. LEVINE, KIRSTEN M. GAFNEY
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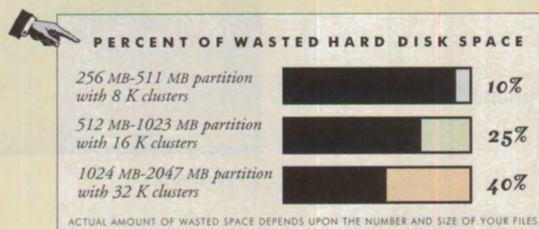
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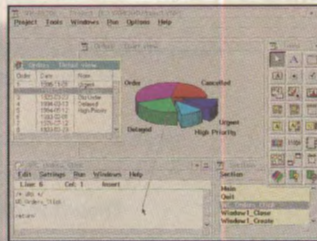
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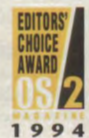
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All Power to OS/2

BY EDWIN BLACK

Corporate OS/2 is constantly thinking on three levels: the past, the present and the future. Maximizing DOS and Windows 3.1 is the imperative from the past. Exploiting the advantage of 32-bit multitasking is the opportunity of the present. Preparing for the next platform is the lure of the future.

For many, the future lies not in another rev of the Intel chip, but in the PowerPC. Whether IBM can preserve Warp's place on the PowerPC is now a major question. If OS/2 for the PowerPC becomes viable, then OS/2 software gurus can continue developing along the OS/2 path. More importantly it means that corporate America's investment in numberless DOS, Windows 3.1 and native OS/2 tools and applications is protected.

PSP already lags behind Microsoft, which is comfortably running NT on the PowerPC. You can walk into a store and buy one off the shelf right now. But by the time you read this, IBM should be preparing to go gold on OS/2 for the PowerPC. That's what they tell us. We've heard fairy tales from PSP before on the Power PC, but the final beta has already been issued and we are cautiously optimistic.

Now let's get some names on the table. Write the name Wally Casey down. As PSP's Director of Marketing, Wally Casey is personally heading up the PowerPC project and from what we hear he and his team have been working day and night. The stakes are big. PSP is fighting its last fight to preserve its viability in the corporate sector and in the server market. Indications are strong that Win95 is really Wind95 as far as corporate America goes. The IS and IT world knows that giant system leaps are not impossible. It literally would take two or three years for Wind95 to become as entrenched as OS/2 in the mission-critical world. Even that would probably only occur through the incremental acquisition of preloaded machines.

In fact, as a test, OS/2 Express quietly began including Windows95 in its listings, right alongside Warp. Now remember, some 85 percent of our readers are IS people who support at least

some Windows stations. Virtually all Express customers are big business, government, the military or consultants. Not a single copy of Win95 sold. Zippo. During this same period we set sales records for Warp and OS/2 compatible apps and tools such as DB2, Partition Magic, GammaTech, DeScribe, Performance 3.0 and many others. In fact August 24 was our busiest day. Wind95 has now been removed from OS/2 Express as unsellable. Sorry Bill. Fortunately, we never ordered any stock.

All this just underscores how vital corporate America is to IBM and Warp. Dan Lautenbach and Estella Haines, that's something for you to write down.

Now to the *OS/2 Professional Awards*, detailed on page 20. They represent more than just the winners of a commercial race for excellence. They represent badges of honor.

To achieve excellence in OS/2 software means more than coming up with a bright idea and working hard until it's right. ISV excellence in OS/2 means almost superhuman perseverance. It means believing in the platform despite the hype from Microsoft. It means honoring your commitments even after IBM breaks its word. It means surviving the economic adversity that haunts every OS/2 venture. It means company principals sacrificing personal lives by devoting long hours trying to make the code do the right thing and the market respond the right way. For those in IBM, it also means making real decisions and taking real action, showing both savvy and commitment, thinking for yourself. It's easier to do it wrong in OS/2 than to do it right.

It's also important to recognize that although only certain individuals and companies actually received *OS/2 Professional* awards this year, there were in fact many unmentioned winners. Everyone who stays true to the platform is a winner. That isn't easy for anyone. And so I salute all those who stick with Warp. Even if you didn't get an award, you deserve a medal. ♦



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Comments, criticisms, and observations

Beyond Win95

Edwin Black's September Publisher's Memo [*OS/2 Beyond Win95*] had me nodding in rueful agreement. Win95 will win the OS war with an inferior product, and superior propaganda, er...marketing.

By now most Win95 purchasers have found that their blue box contains little more than blue smoke—the product just doesn't install easily or work with their software. They probably won't even notice that Win95 really isn't a true 32-bit OS. They'll just feel taken by Microsoft, and they won't like it.

Accordingly, IBM should forget the nuns on the Internet and the Pimple Boy with obliterated software. Here's a wonderful opportunity to boost Warp sales like never before: Have a "We Hear and We Care" ad campaign that urges unhappy Win95 customers to bring the title page from their Win95 manual to their software dealer and get Warp for \$29.95 (or maybe even \$19.95). If, after loading and trying Warp, they prefer Win95, offer a full, no-questions asked refund.

IBM may have to include a free Windows cleaning kit to remove the offending Microsoft product, but the effort would be worth it. The public would have a working OS that outdoes Win95 and a whole lot more.

Austin W. Troxell
Greenville, South Carolina

We were the champions

I've been a devoted OS/2 user for more than a year and a half, from 2.1 to Warp. I work in a store in Appleton, Wisconsin that sells music, videos, books and software. Several weeks ago my manager told me he had talked to an OS/2 demonstrator (during a demo of OS/2 at our store) and suggested that I would be a great OS/2 Champion. In addition to being the area OS/2 rep, I would get a cool OS/2 shirt, free copy of Warp Connect and demo/beta testing privileges for new software.

Just before the big Win95 week the OS/2 demo guy came in and told me he

had received some E-mail saying that "IBM was de-emphasizing OS/2 to the retail market," and thus had no more Champions.

I was outraged to say the least. How can IBM be so stupid as to leave us home OS/2 users high and dry? Corporate America may be able to use OS/2, but the real market is the home user.

Get some people who know how to market a product and get it out at critical spots. Push developers to program OS/2 apps. The limited amount of drivers for OS/2 is terrible. Game developers can't even program (DOS-based) games well enough to run under OS/2.

Finally, IBM should sell off OS/2! They don't deserve to handle it anymore. It's been around for 10 years and where is it now? On a very small install base with little to no apps to run on it.

Jon-Paul LeClair
Oshkosh, Wisconsin

Doomsday for OS/2

Your comments [Wizard of OS/2, September] on the solid object-oriented interface reminded me of DoomEdit/PM v1.06—a level editor written for the popular Doom game.

One user E-mailed the program's author to say he has been showing his friends DEPM and that many of them like it so much they are switching to OS/2. It seems pretty weird that people are using an OS/2 editor for a DOS game, especially since Doom doesn't really play well under OS/2. You would think that if people wanted a graphical editor, a Windows one would be a lot less effort. It seems however, that an increasing number of people feel that DEPM is worth it.

DEPM is a typical OS/2 PM application: 32-bit, multithreaded and object-oriented. These things are getting pretty commonplace for OS/2 users, but it really seems to amaze DOS and Windows people. Another neat thing: OS/2 lets you edit levels and then use Doom to view your handiwork without shutting the editor down. OS/2 users never think twice about this, but

again, DOS (and even Windows) people are stunned.

OS/2 doesn't need a lot of applications (Windows must have about a half-dozen Doom editors) but it does need quality apps—ones that make users want to switch to OS/2.

If you haven't heard of DEPM and want to check it out, it can be found at hobbes.nmsu.edu and ftp-os2.cdrom.com in the os2/games directory as DEPM-V106.ZIP.

Jeff Hildebrand
via the Internet

Holy roller and writer

Thanks for the review of DeScribe [Special Report, September]. I have a CD-ROM version on my hard drive and maybe I'll give it a more intensive try.

My main use of the computer is word processing: correspondence, church newsletters and bulletins. Since I've used WordStar CP/M and find computer graphics less than ideal, I've stayed with WordStar 7. Cut and paste may be primitive but remains useful. I tried Word 6 for Windows, but it was so buggy as originally released I gave up in disgust. WordStar may not do everything, but what it does do it does better and more simply than GUI based word processors.


I might also note that there is failure in DeScribe: it apparently will not display the dingbats characters native to Postscript printers. Nor is the generic OS/2 Postscript driver ideal, since it fails to print my Epson printer's Postscript cartridge variations. Now, if only manufacturers could be persuaded to write OS/2 drivers.

Reverend Canon Winston F. Jensen
Kernville, California


Master the message

I own a tape drive that attaches to the parallel port of my computer for backup purposes. Software that made it possible to use this device under OS/2 did not exist until MSR Development's BackMaster became available. I have

continued on page 13




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BYTES & PIECES

News and trivialities, important and obscure

Microsoft missive misleading

When Microsoft recently joined IBM in claiming to offer China's "preferred standard" operating system, OS/2 watchers shook their heads in confusion. Hadn't IBM already signed such an agreement with China? Microsoft's press release further claimed that the agreement would "standardize the Chinese version of the Microsoft Windows 95 operating system as the software development standard for China." Andrea Cook, of Microsoft press relations, confirmed: "There's a set of software standards that all developers in China will follow," she said, "and the user interface and technology is all Win95—it's all based on that platform."

But IBM spokespeople directly dispute this claim. In an IBM online forum, Mac Jeffery, director of public relations for IBM Asia Pacific wrote: "China's Ministry of Electronic Industries (MEI) has not chosen Win95 as a 'preferred standard.' MEI has indicated that Win95 is an acceptable standard for use in China, but OS/2 Warp remains the preferred standard as endorsed by the Ministry."

In fact, if you read the fine print, Microsoft's press release says that two technological committees under the MEI's jurisdiction "are to formulate software development procedures in accordance with *China's industrial standard* [emphasis ours] for Windows 95." In other words, when all is said and done, China calls the shots despite whatever standards "help" Microsoft might offer.

In contrast, Jeffery added on the forum, IBM was specifically invited by the Chinese to join an API standard development committee and already is helping the Chinese set those very standards—making the IBM/China agreement far more significant. He writes: "Microsoft has simply agreed to follow IBM's development lead. They will *not* be involved in any API standard development with MEI."

Charlotte Franklin, an IBM interna-

tional press relations manager for PSP, says it's hard to do business without the official "preferred product" seal of approval. "Microsoft actually had this problem," she said. "When (Windows) 3.1 was released, it wasn't endorsed by the MEI and it didn't sell very well." That's why, she said, Microsoft now is trumpeting China's approval of Win95.

IBM claims Microsoft's braying doesn't affect their status in China. "When the MEI invited IBM to work on the API standards committee, it was the first time they invited an outsider to participate in the standards group," Franklin said. "It's the highest endorsement we can get—it's quite unusual to get approved to the level OS/2 has been. IBM is working with the MEI to establish the standards—Microsoft is toeing the line."

OS/2 Kiyo

A new mom-and-pop style OS/2-only store just opened its doors in Annapolis, Maryland. Wife and husband team Nancy Hoyt and Cory Hamasaki hope Kiyo Design (Kiyo is their daughter's middle name), officially opened October 16, will serve what they see as a neglected market for OS/2 applications.

Hamasaki said his initial goal is to stock 60 OS/2 titles, shareware, magazines and books in a store with about a quarter of the shelf space of most computer stores.

More than just products, Hoyt and Hamasaki hope the store also will offer a semblance of an OS/2 community. For instance, they plan to put a 300 sq. ft. conference room to use for classes, technical presentations and meetings. Hamasaki hopes at least one machine will be available for testing software before people buy. He also plans to enlist the help of Team OS/2 members for questions and to subcontract bigger problems out to local software consultants such as himself. "I want OS/2 consultants to register with the store so the customer has a list to choose from."

Hamasaki said he's also enlisting the help of friends to write reviews to place alongside each product box in the store.

Not surprisingly, Hoyt, president and Hamasaki, technical consultant, ran into a few "glitches" in setting up the business. "It's almost impossible to find OS/2 distributors," Hamasaki said. "It's like a dark secret. And the ones I've talked to only handle partial lines of product. "It doesn't seem to be an easy business to get into," he said.

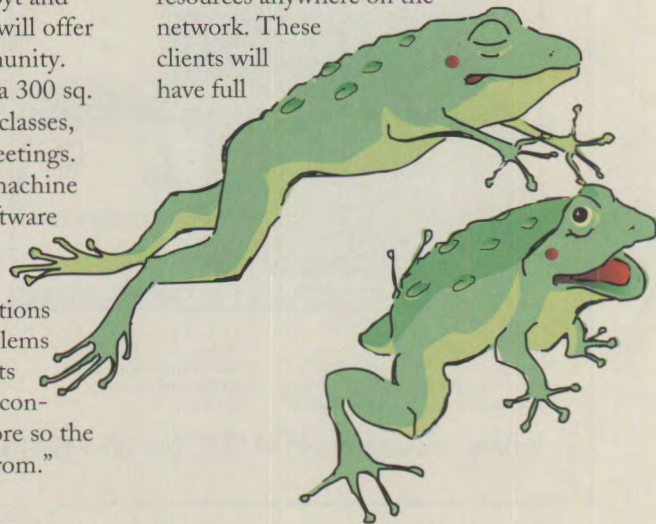
But Hamasaki said these problems aside, he's looking forward to success for Kiyo Design—even though he doesn't know whether to expect famine or flood. "I don't know if we'll sell enough to make rent or salaries," he said at one point during an interview.

Before the store opened, Hamasaki said some people E-mailed him promising to drive to the store from out of state "because finally someone is serving their needs." But Hamasaki was hedging all bets in his response: "I just hope they do come," he said. "I know there's interest, I just don't know how much."

Leapfrogging NT

IBM will release an OS/2 Warp Server package in the first quarter of 1996 that features a Windows 95 client along with the previously unbundled capabilities of Warp and LAN Server 4.0.

OS/2 Warp Server will give Windows 95 clients aliases for accessing resources anywhere on the network. These clients will have full



domain logon capability and automatic logon assignments to OS/2 Warp resources. Individual home directories will serve Windows 95 clients when they logon and cannot be accessed by anyone else on the network. Besides the obvious advantage of bundling the capabilities of OS/2 Warp and LAN Server 4.0, IBM said it also has enhanced package features such as system management, backup, remote access and advanced print function.

Joe Stunkard, new media relations manager for IBM's Personal Software Products division, says the Windows client and the package's overall functionality will cement IBM's presence in the server markets for both large and small businesses. "We believe with the features we've included, we've leapfrogged NT," Stunkard said. "We have high-level systems management integrated into (Warp Server)," he said. "If you wanted that with NT, you'd have

to buy SMS Server and SQL Server, and it still wouldn't be fully integrated."

Stunkard added that IBM is already well-positioned to push Warp Server. "The market is clearly moving from your basic file and print to an application server [focus]. OS/2 is the number one operating system in this marketplace, with the largest install base. Our goal is to penetrate markets that maybe people don't normally associate with IBM."

OS/2 Warp Server entered beta testing in September. At press time, pricing had not been decided. OS/2 LAN Server users will qualify for an upgrade.

Development relocation

In late September, IBM announced plans to relocate Boca Raton, Florida-based OS/2 software developers to Austin, Texas. The move consolidates IBM's Personal Software Products development and product service organization into one major location.

The consolidation is designed to improve PSP's response time by allowing development and marketing teams to work more closely together. "This does not represent a change in IBM's unwavering commitment to OS/2," said John W. Thompson, general manager of PSP, in a press release announcing the move. The Boca Raton development staff, which works on the OS/2 base operating system, user interface and multimedia, will join the development team in Austin, which works on LAN Server, Warp Server, objects, distributed computing and the IBM Microkernel.

At press time it was still uncertain how many developers would make the move to Austin and what effects the move will have on OS/2 development. An IBM spokesperson, however, did tell *OS/2 Professional* that OS/2 for the Power PC would remain on track for a Q4 release. ♦

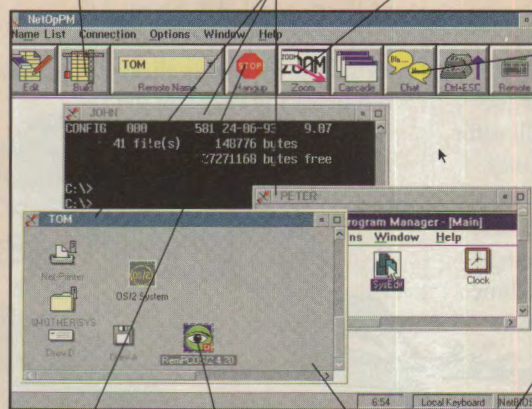
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INPUT

continued from page 9

BackMaster version 1.1a and I am pleased that I can now use my tape drive.

However, I was dismayed when I read a note in small print on page 24 of the manual which states that, although OS/2's extended attributes (EAs) are backed up, BackMaster does not verify them.

I asked MSR's CompuServe forum whether MSR would provide a free upgrade or patch to correct this serious shortcoming. MSR replied that they would consider verification of EAs for a future version of BackMaster, but the respondent said he had no idea when an upgrade would be available. In my E-mail conversation with this person I asked several specific questions on this and other topics. I consistently received replies only in the broadest sense to a few of my questions.

Finally these ambiguous and muddled responses prompted me to write a

letter to MSR. Three months later I have yet to receive a reply. I am glad that BackMaster exists. I hope MSR's profits will be sufficient so it can afford to publish a free patch and improve its customer service.

Vim Toutenhoofd
via CompuServe

SO loves OS

When I first installed OS/2 2.1 on my 386/8MB box, my wife was less than impressed with the interface, system resource demands and the rather sluggish Windows 3.1 support. She was comfortable with Windows 3.1 and was one of those users who, in a rather DOS-esque fashion, shuts down one program before starting the next.

I've since installed Warp, upgraded the guts of my box to 486/16MB and obtained a number of OS/2 programs. Now my wife prefers Warp to Windows and rarely even uses WIN-OS/2 ses-

sions. The advantages of multitasking apps for a mother of an 11-month-old are obvious: now she can actually write, print and fax in the meagre amounts of time our son allows her. Moreover, she prefers Warp's GUI to that of Win95.

If someone like my wife, who is not willing or prepared to invest a great deal of time into learning a new OS, can move to prefer Warp over Windows for home use, perhaps the number of others of similar disposition is not insignificant.

I agree that the only reason Warp did not make the hoped for penetration on the home front is due to IBM's own efforts to the contrary. I only hope that the suits at Big Blue are wise enough to let their new found marketing talent (Lotus) take one more stab at moving Warp into the home market, and that Lotus still has enough of that talent to do it right.

Michael Solonyanko
via the Internet ♦

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Games Computers Play

BY BRADLEY D. KLIEWER

As I write this, it seems way too early to be thinking about the holidays. Nevertheless, the November/December issue is upon us and my thoughts have turned to games. In the spirit of the season I have taken a diversion, but make no mistake—there is no rest for the weary. Some of these games can keep you playing until the wee hours of the morning if you don't keep your eyes on the clock.

OS/2 games are multiplying rapidly. I had time to explore only three sets of offerings. Within those bounds, I still had too little time to search the nooks and crannies, although this gave me a chance to test Toshiba's new Pentium/CD-ROM laptop, the CS 400. The four packages were the new IBM Family FunPak, MSR Development's MicroLearn Game Pack Vol. II, SimCity Classic and Galactic Civilization.

The IBM Family FunPak is the most diverse of the three. It is a CD-ROM collection of games and other software designed for home use (such as In Charge at Home!, the Child Development Guide and the American Heritage Dictionary, Concise Edition). IBM has licensed the FunPak programs from a number of vendors giving the vendors an opportunity to sell additional (or more functional) versions of the games.

SimCity includes more cities and scenarios if you buy the stand-alone version from Dux and the Star Emperor game is similar to (but much less detailed) than Stardock System's Galactic Empire. Both are strategic games where you build a city (or civilization) based on numerous economic and political factors.

For those with a taste for action in a doom and gloom scenario, IBM includes a DOS-based program called Rapid Assault—a Rambo-esque scenario in which you pilot one of four vehicles through a 3-D maze of city streets while robotic warriors, flying saucers and other assault vehicles try to do you in. Rapid Assault requires that the FunPak CD-ROM be inserted in the drive to access its 70+ MB worth of data files—it also gives parents a

chance to restrict access to the game if they don't approve of the violence level. I much prefer the aforementioned simulators and the strategic arcade-style games (also included in the FunPak).

The arcade games (primarily drawn from the MicroLearn OS/2 Game Pack Volume I) vary from moderately interesting to teasingly tantalizing, but would benefit from sound adapter support and improved graphics. If Volume I isn't quite your speed, don't let it dissuade you from Volume II. The new CD-ROM has a very polished feel, good music and sound effects, and a well-balanced mix of speed and skill. While no substitute

for a Sega or Nintendo, Volume II will hold your attention. The MicroLearn OS/2 Game Pack Volume II is the perfect complement to a laptop when you need a break during those long cross-country flights.

If you want a game that will hold your attention for hours beyond your flight, you'll want to look to SimCity or Galactic Civilization. I found SimCity more relaxing and easier to manage while watching the news (the most annoying effect was the heat of the Toshiba CS400 on my lap). Having already tried Galactic Civilization, however, I missed the

low level tweaking that could help me micromanage the growth.

Galactic Civilization is a tweaker's dream come true. The enmeshed elements of espionage, diplomacy, trade, militarization, economics, research and development and morale (to name just a few) can keep your attention focused for hours. And just as you master the basics, you discover details like fine-tuning the planets' low-level allocation of assets toward morale, research, military might and the like. Moreover, this multidimensional game has two scenarios for eventual success or failure—you may either strive for military conquest of the universe or diplomatic unity. For the ultimate experience in world-building, give Galactic Civilization a try. And if you value your time, keep the universe small (yet another setting you can tweak). ♦



OS/2 and the

Corporate users are looking for a more efficient and less costly computing future.

Will Warp for the PowerPC provide the solution?

PO

BY WAYNE RASH AND BRADLEY D. KLIEWER

The PC platform is awash in a sea of misery: corrupted and outdated specifications that can only nominally be called "standards." It's part of the reason OS/2 gained an early reputation for difficult installs and that Microsoft's support lines for Windows 95 have been deluged by hundreds of thousands of calls. If only the old could be swept away and replaced by something more organized, more robust and designed from the start for skyrocketing processor speeds (current designs evolved from a 4.77MHz system—today's rates are pushing the 200MHz envelope).

The problem stems from a legacy or, more accurately, from many legacy applications. While it would be wonderful to design a new hardware platform from scratch, nobody wants to redesign their existing systems from scratch—particularly corporate users like you who have invested years of labor developing mission-critical propriety software. Such was the *raison d'être* for IBM's OS/2 and its highly successful AS/400—nearly pristine support for legacy code with a vision toward the future. And, in a curious twist of fate (or even, perhaps, a great deal of careful planning), both software standards are converging on an up and coming hardware platform called the PowerPC.

The goals of the PowerPC processor are admirable—a single CPU that handles every popular hardware/software platform under the sun: AIX (IBM's UNIX), Macintosh/System7, AS/400, Windows NT and soon OS/2. Some of these, such as the AS/400 and Macintosh, currently require custom support hardware. The rest can run on a single hardware platform (although not simultaneously) and encompass their full range of legacy DOS and Windows support from their original versions.

The Hard Facts

On the hardware level, the PowerPC processor finds support in IBM's Power Series as well as new desktop computers from other companies including Apple Computer and IPC Technologies. This processor is designed to one-up the current industry leading processors by Intel Corporation with a faster, more powerful and

less expensive machine than Intel's brand leader, the Pentium.

As such, the PowerPC processor is the first to differentiate itself as more than just another processor for the high-end workstation by taking direct aim at general purpose computing. The first PowerPC processors debuted about 18 months ago, Apple's newest Macintosh computers. These machines were faster than earlier Motorola processors such as the MC 68040. Mac users also have seen a PowerPC performance boost in the end user market. The next stage is to demonstrate its power to the bastions currently committed to the Intel platform.

Unfortunately for IBM, the delays that have beset an OS/2 Warp release on the platform (it is over a year late) are creating a massive opportunity for Microsoft. You need only walk into a computer superstore to see Windows NT up and running on IBM PowerPC systems. With major software vendors jumping on the Windows 95 bandwagon, we may soon see a plethora of new apps ready to run on Windows NT. From there, it is but a short jump (or recompile) to the PowerPC. In the meantime, OS/2 developers and users must hold their breath while IBM finishes its long-delayed microkernel.

Waiting for OS/2

By the time you read this, IBM will have released its final beta version of OS/2 for the PowerPC and expects to ship the finished product before the year's end. However, recent reports suggest a complete release may be delayed into the first quarter of next year.

This new version of OS/2 Warp will significantly boost performance over an Intel processor. "When you open a folder that contains a number of icons it just pops on the screen," said IBM's Wally Casey, director of marketing for IBM's Personal Software Products division. OS/2's speedier performance on the PowerPC won't require the special accelerator boards needed for fast performance on Intel machines. Instead, OS/2 just turns the rendering over to the floating point capabilities of the PowerPC. "You don't need any special software probes to measure small differences in speed...You can measure it with a stopwatch."

WARP

Mark Landrum, advanced systems product manager for IPC Technologies, based in Austin, Texas, is particularly impressed with the promise that OS/2 and the PowerPC hold for multimedia development. Video markets, for instance, are using the machines for their advanced speed in tasks that require heavy use of floating point math, such as morphing and 3-D rendering.

"OS/2 has some important multimedia resources," Landrum said, noting that software use of digital signal processing is still in its infancy. "NT doesn't have anything like that." IPC recently introduced a new line of PowerPC machines and has expressed interest in running OS/2 on them.

Casey, in turn, feels that OS/2 and the PowerPC create a synergy that will lead to a whole new way of using computers. "The next revolution is in how you interact with the computer," he said. Because the processor itself can handle digital signal processing, anyone will be able to interact with their computer simply by talking to it. This gives both software and hardware companies an immediate foot in the door for this "human-centric" approach. "There are tremendous opportunities in terms of speech," Casey said, predicting that voice operation could start showing up by 1996 or 1997.

And this is precisely where the PowerPC

can begin saving corporate budgets. The PowerPC has capabilities that Intel is only now thinking about for future versions of its X86 of processors such as built-in digital signal processing and RISC. Describing what she calls a Sensory Suite, IBM's Power Series Marketing Director Lineene Krasnow said the PowerPC can accomplish with software what earlier computers could only do with difficulty, and with added hardware. These "media rich" computers, she said, will feature things such as software MIDI synthesizers and vastly improved speech capabilities. "You're saving \$1,200 to \$1,500 in adapter cards you'd otherwise have to buy."

What's Next?

"Customers will initially get Warp Connect (for the PowerPC)," Casey said, describing IBM's plans. The next step will be "...a higher performance file system and more multimedia capabilities in the user interface." The Intel version of OS/2 also will be fitted with many of the PowerPC's capabilities, although that may take a while. That's partly because Intel won't be supporting all of the capabilities OS/2 needs until the Pentium Pro (P6) or its successor, the P7, is released.

In the meantime, companies are already starting to show strong interest in PowerPC-based machines. Krasnow said PowerPC machines already are showing up in applications such as traders' workstations where considerable computing power is vital. And Casey notes that several companies other than IPC are seriously considering support for OS/2.

With all its power, where will OS/2 end up? Will it be used only for advanced multimedia? Will it support just CAD and

graphics? Krasnow thinks it will do all of this and more. "Forrester Research calls it a Super Client," she said, adding that the PowerPC will provide the next generation of performance for client/server environments. Meanwhile, Krasnow's clients are already giving the PowerPC what she thinks is the highest possible praise: "They're telling me it works."

Where's the Beef?

On the application side, however, IBM must convince an already jittery developer market that the effort to produce a Warp for PowerPC application is worthwhile. On the whole, OS/2 developers have been uncharacteristically tight-lipped about their development plans, despite IBM's assurances that a year-end release is imminent. Only Jim Lennane, president of DeScribe, was willing to speak out. "We could do [a port] in a week, but we're not—for two reasons. One, I offered to put a demo version of DeScribe on every PowerPC and was turned down... that tells me IBM is not interested. Two, we buy our graphic and text import/export filters and dictionaries from other vendors, and we have to convince them that their products are worth porting."

Another vendor of a best-selling OS/2 product, in off-the-record conversations, expressed doubts about future market strength and noted that IBM has cut back its developer relations efforts. This vendor's attempts to receive assurances about IBM's plans for OS/2's advancement have been met with silence.

As of press time, IBM officials had failed to respond to our requests for additional information. IBM's handling of Warp for the PowerPC has been, at best, disconcerting. We have urged caution in adopting the first release of major new computer products in the past, and see no reason to recommend otherwise now. Make no mistake, while Warp for the PowerPC draws much from the Intel platform, its microkernel core sports a completely overhauled engine. We advise you to break it in slowly.

Despite concerns about the PowerPC, we remain cautiously optimistic about Warp's corporate future on both Intel and PowerPC platforms. A few signs foretell a break in the clouds after Microsoft's deluge of Win95 publicity. IBM continues to release new Warp products. Warp Server offers more than a simple repackaging of current products, but an evolutionary step forward in their integration. Within IBM, Warp application development remains strong. Foremost amongst the promising signs, Microsoft has confirmed that it has no plans to support OS/2 Warp APIs on Windows NT. The lack of demand for such an API where OS/2 has built a strong following portends continued confidence in OS/2 as a corporate solution. Worldwide, corporate operations rely on a coherent strategy for cross-platform

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client/server applications that IBM continues to enhance. The consolidation of development teams, as most recently witnessed by the merger of the Boca Raton and Austin facilities, should strengthen and speed development efforts.

IBM's commitment to the PowerPC remains broader than OS/2 and the PC platform. The highly profitable AS/400 operations ensure that hardware investment will continue. Processor demand will continue to be bolstered by Macintosh and AIX users. And with a nearly complete microkernel OS/2 on the

horizon, continuing Warp enhancement should require little more than pennies on the dollar invested. IBM has not garnered a reputation for stellar advancement of the computing platform, but rather for its staunch support of legacy applications and commitment to a corporate vision. Perhaps the most telling forecast of Warp for the PowerPC is that IBM's reputation precedes it. ♦

Wayne Rash, Jr. is a Contributing Editor and Columnist for Communications Week, a CMP publication.

OS/2 FOR POWERPC: A BETTER OS/2 THAN OS/2?

BY STEVE MASTRIANNI

The PowerPC processor, designed by Apple, Motorola and IBM, is poised to take a big chunk out of the Intel-dominated PC processor market. Apple and Motorola are already shipping the PowerPC. IBM is preparing to release a PowerPC version of its popular OS/2 Warp operating system based on an IBM-modified Mach microkernel, which was originally developed by Carnegie Mellon University.

The microkernel is portable—meaning it is easily modified to run on different hardware platforms. It also is scalable, so it can run on different classes of systems, from embedded systems to the big iron. And it supports the CORBA—Compliant Distributed Computing Environment, or DCE. DCE allows the sharing of resources and functions that can be spread out over multiple processors. These powerful features allow the microkernel to be expanded to fit the ever increasing needs of business by adding more processors. Support for OpenDoc provides an even more powerful platform for developing and running human-centric applications.

Most of OS/2 Warp's code is written specifically for the Intel processor family. This code, often optimized and written in assembly language, cannot be easily moved to other hardware platforms. At the time OS/2 was designed and written, the 16MHz 80286 was the most commonly installed microprocessor. Writing the OS/2 code in a fairly portable language such as C would have yielded marginal performance on the low-end machines, especially in the critical code sections responsible for multitasking. Although smaller and faster than its 32-bit counterpart, the remaining 16-bit code has caused great pain for device driver writers. Much of this 16-bit code exists

in the file system section of OS/2, which provides the device driver interface to the OS/2 kernel. Retrofitting a 32-bit device driver model into OS/2 Warp would mean rewriting many of OS/2's underlying subsystems—a formidable task.

Device drivers have always been OS/2's Achilles' heel. Although the lack of device support is no longer an issue, early versions of the operating system suffered from the lack of critical device support. To prevent this, IBM has totally redesigned the device driver models for the PowerPC. The new Graphics ADD or GRADD video device driver model greatly simplifies writing a video device driver, while the new Omni printer device driver model simplifies writing printer drivers. Base device drivers have finally been freed from their 16-bit constraints by the new ADD32 model. All of these models make writing a device driver for OS/2 a breeze. The GRADD and Omni device driver models are already available in Warp, and IBM plans to retrofit the ADD32 model to OS/2 Warp in the near future.

OS/2 for the PowerPC finally gives OS/2 users the freedom to choose their hardware platform. Advances in PowerPC architecture will make it a perfect choice for small, medium and large scale systems; or as IBM says, from "palmtop to teraflop." I don't expect it to replace Intel as the leading supplier of processors, but I like being able to choose for myself. ♦

Steve Mastrianni is president of Personal Systems, Inc., a Canton, Connecticut, consulting firm specializing in device drivers and real-time applications for OS/2 and Windows NT. He can be reached at 71501,1652@compuserve.com.

1995 AWARDS

RECOGNIZING THE BEST IN OS/2 THIS YEAR

ACHIEVING EXCELLENCE IN THE OS/2 MARKETPLACE REQUIRES SOFTWARE INGENUITY, COMMERCIAL STAMINA AND NOT A SMALL AMOUNT OF INDIVIDUAL AND CORPORATE DEDICATION. LONG AGO, *OS/2 PROFESSIONAL* EDITORS MADE A COMMITMENT TO THE BEST OS/2 SOFTWARE, HARDWARE AND EXCELLENCE, REGARDLESS OF THE SIZE OF THE DEVELOPER OR STATURE OF THE INDIVIDUAL. A WORD ABOUT OUR REVIEW PROCESS: TO ACCOMMODATE OUR LEAD TIME, WE WERE ONLY ABLE TO EVALUATE PRODUCTS THAT WERE GA ANYTIME BETWEEN LAST FALL AND THIS FALL. WE KNOW THAT SEVERAL EXCELLENT PACKAGES HAVE ARRIVED SINCE WE DELIBERATED AND WE HOPE TO INCLUDE THEM IN NEXT YEAR'S REVIEW.

IN MANY INSTANCES THE DECISIONS WERE TOUGH. OS/2 APPLICATIONS AND TOOLS ARE MATURING AND THE VARIETY OF TOP FLIGHT PRODUCTS CONTINUES TO BROADEN. WE CONTINUE TO PRESENT AWARDS NOT ONLY TO SOFTWARE AND HARDWARE PRODUCERS, BUT TO THOSE WHO HAVE SHOWN EXCELLENCE IN PERSONAL OR PROFESSIONAL ENDEAVOR. THAT INCLUDES IBM, WHERE LEADERSHIP, EXCELLENCE AND COMMITMENT TO WARP DESERVE A MEDAL. TO ALL THE WINNERS, THE EDITORS OF *OS/2 PROFESSIONAL* SALUTE YOU.

BEST NEW OS/2 APPLICATION **COLORWORKS**

Its eye-catching graphics turn heads. And with its cutting-edge support for multithreading and SMP, Colorworks has the potential to attract new converts to OS/2 Warp.

BEST NEW OS/2 UTILITY **PARTITION MAGIC**

For years, users asked for IBM to supply a utility that would automatically convert FAT partitions to the more efficient HPFS. Partition Magic fills that niche and more by converting, resizing and moving your existing partitions.

BEST NEW COMMUNICATIONS PACKAGE **HYPERACCESS FOR OS/2**

With so many similarities between RhinoCom and HyperAccess it ultimately came down to cosmetics and a handful of features that, simply put, make HyperAccess easiest to use on a day to day basis.

BEST NEW BACKUP PROGRAM **BACK AGAIN/2 PRO**

Sporting an easy-to-use GUI, integration with the Workplace Shell and now support for high capacity EIDE drives, this is our hands-down favorite among backup programs.

BEST NEW DEVELOPMENT TOOL **IBM VISUALAGE C++**

Finally, IBM has integrated its premiere C++ development environment into a coherent visual development system with the addition of technology from its highly acclaimed VisualAge (Smalltalk) platform.

BEST OS/2 MARKETING CAMPAIGN **DESCRIBE VOYAGER**

After mishandling many marketing opportunities with limited and expiring editions of DeScribe, the company decided to reverse itself and boldly distribute its world class word processor, making it both cheap and plentiful. The commoditized version of DeScribe has been a success other ISVs should consider.

MEDIA AWARD **NICHOLAS PETRELEY**

True to *Infoworld's* corporate audience, Nicholas Petreley has maintained a firm belief in the advantages of OS/2 Warp

while not glossing over its faults. While we generally prefer awarding the general press, the media hype over Windows 95 led us back to the trade press where more commentators were able to cut through the PR fog.

CORPORATE COMMITMENT STARDOCK SYSTEMS

With a gamut of offerings from entertainment (Galactic Civilizations) to utilities (OS/2 Essentials) to desktop managers (Object Desktop), Stardock has a proven record with OS/2 commitment. Following the successful lead of last year's winner, SofTouch Systems, SDS recognizes that market success requires a mix of quality products.

OUTSTANDING IBM EXECUTIVE STEVE MILLS

As general manager of Software Solutions, Steve Mills has shown drive, flexibility and vision in bringing IBM and OS/2-compatible software into the next generation of connectivity. Mills oversaw the development of WorkGroup and will be ushering it into the Lotus Notes era. Indeed, Mills was a key executive in the Lotus acquisition. He is a champion of OS/2 and part of IBM's executive future.

BEST HARDWARE IBM BUTTERFLY

Thanks to its foldout keyboard, not only does the ThinkPad 701C pack a lot of punch in a portable package, but its pre-loaded Select-A-System (a dual boot option for Windows and OS/2) gets OS/2 road warriors up to Warp speed at the push of a button.

OS/2 PRO OF THE YEAR MARK ELLIOT

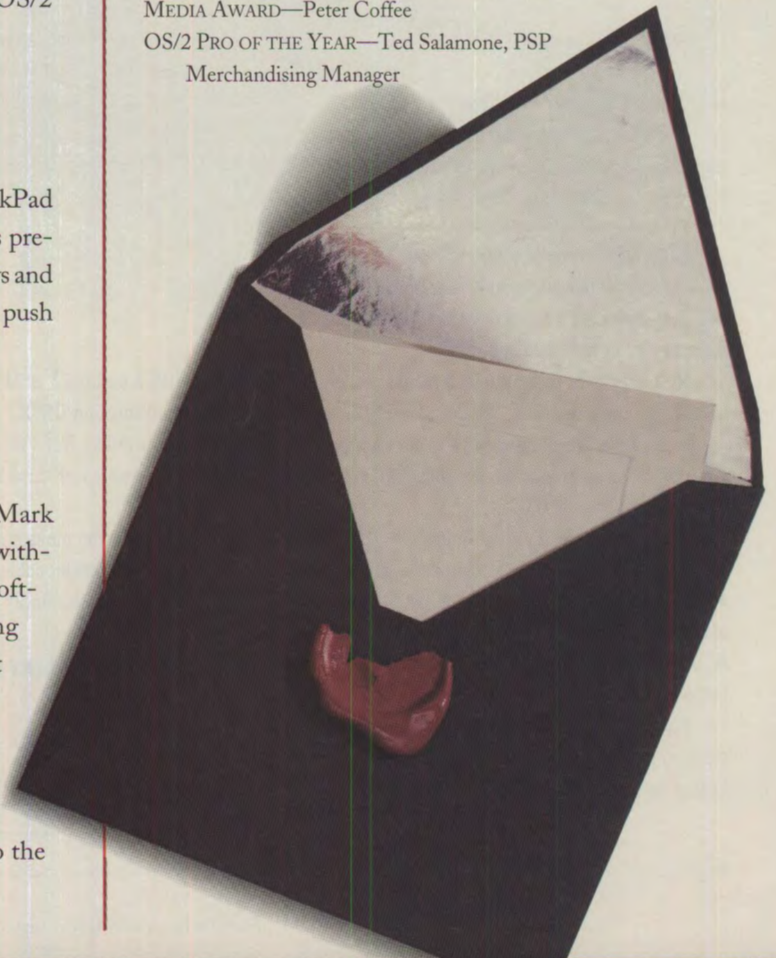
IBM needs bold, swift-acting and decisive leaders. Mark Elliot may be the finest example of that type of leader within the IBM global organization. As vice president of software marketing, Elliot has been on troubleshooting assignments for IBM Chairman Louis V. Gerstner that have contributed to OS/2's presence in the retail channels, Warp's expansive consumer and business advertising and the ability of PSP and SWS to solve problems. Now vice president of software marketing IBM Europe, Elliot is applying his commitment to OS/2 to the global market.

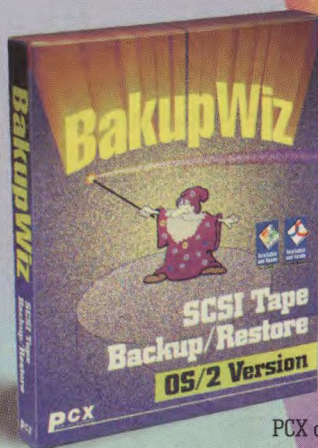
1994 WINNERS

BEST NEW APPLICATION—DeScribe 5.0, DeScribe, Inc.
BEST NEW DEVELOPMENT TOOL—CA-Realizer, Computer Associates
BEST NEW APPLICATION (READER'S CHOICE)—Ami Pro for OS/2, Lotus Development Corp.
BEST HARDWARE—Parallel Storage Solutions Tape Backup
OUTSTANDING IBM EXECUTIVE—Louis V. Gerstner, CEO
CORPORATE COMMITMENT—One Up Corp.
TEAM OS/2—Timothy Sipples
MARKETING AWARD—SofTouch Systems, Inc.
MEDIA AWARD—Howard Stern
OS/2 PRO OF THE YEAR—Tony Pereira, President, Clear&Simple, Inc.

1993 WINNERS

BEST NEW APPLICATION—cc:Mail for Workplace Shell, Lotus Development Corp.
BEST NEW DEVELOPMENT TOOL—WATCOM VX-REXX v1.01, WATCOM International
BEST NEW APPLICATION (READER'S CHOICE)—WordPerfect 5.2 for OS/2, WordPerfect Corp.
BEST HARDWARE—Lexmark LaserPrinter 403910R, Lexmark International
OUTSTANDING IBM EXECUTIVE—Bill Rich, General Manager, PSP
CORPORATE COMMITMENT—Lotus Development Corp.
TEAM OS/2—Dave Whittle
MARKETING AWARD—IBM and Lintas, New York for The Roadblock
MEDIA AWARD—Peter Coffee
OS/2 PRO OF THE YEAR—Ted Salamone, PSP Merchandising Manager





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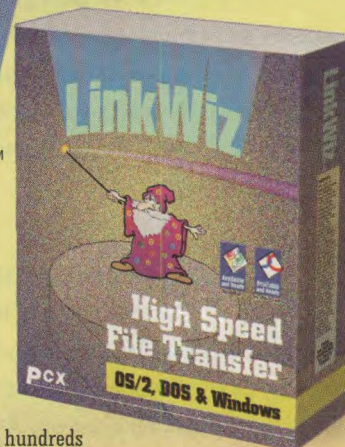
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Look It Up

THE DELUXE AMERICAN HERITAGE DICTIONARY

A popular desktop reference makes its way to OS/2, paving a path for others.

BY FRANCIS REDDY

Ambrose Bierce complained tongue-in-cheek that the dictionary was “a malevolent literary device for cramping the growth of language.” But for students, language enthusiasts, writers or anyone else struggling to find the right word, a good dictionary at the fingertips is a necessity. That notion of fingertip access takes on a much more literal meaning in the era of computers. Who wants to fumble through a dog-eared book? Reference tools should be no more than a mouse-click away!

Until recently, OS/2 users have had to make do with the all-too-plentiful reference works available for That Other Computing Environment. But DUX Software now has a package that should delight OS/2 wordsmiths—the *Deluxe American Heritage Dictionary* and *Roget's II Thesaurus* combined in a single OS/2 interface.

The dictionary itself contains 220,000 words, with pronunciations, usage notes, idioms and sometimes quite detailed etymologies; the thesaurus includes 500,000 synonyms. The package is available on both 3.5-inch floppies and CD-ROM. It can be setup to run solely from the CD-ROM or can be installed on a hard disk with 15MB of free space. Otherwise the program's requirements are the same as Warp's, and installation is a breeze.

The dictionary's interface is designed along the same lines as an OS/2 Settings Notebook. A menu bar primarily supports clip-

board functions and on-line help. The features that are by now standard equipment for on-line dictionaries reside on tabs below the menu bar.

Select the Dictionary tab, enter a word from either the keyboard or the clipboard and you'll get its definition. A list of spelling alternatives pops up if you've misspelled, and wildcard

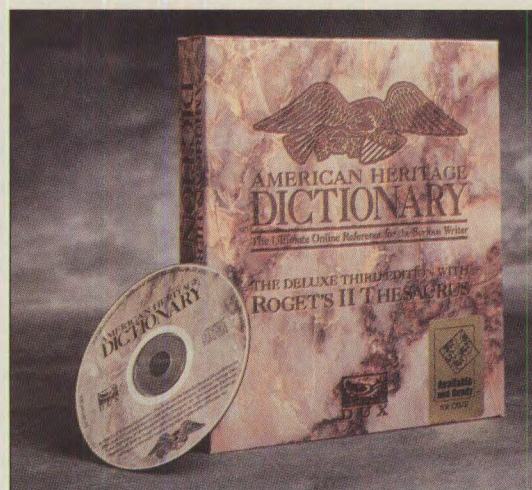
searching using ? and * is also supported. For example, entering “table*” gives you a selection of 60 words from table to table wine. A double-click on any word brings up its definition.

To thumb at random through the dictionary, select the Browse tab. You can scroll down an alphabetical listing of every entry in the book or type a single letter to skip to the first entry starting with that letter.

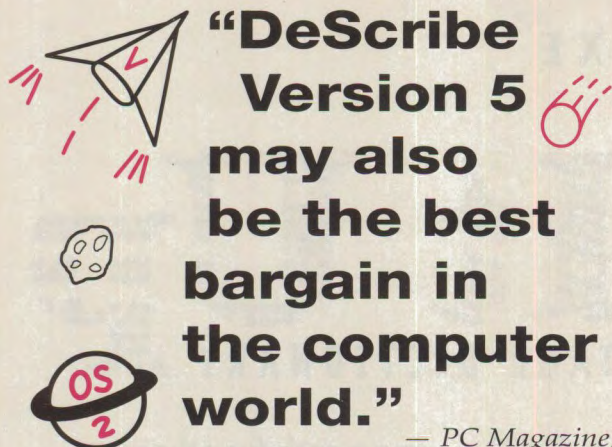
Those fond of word games will enjoy the anagram feature, which finds words within other words or groups of letters. Entering “OS/2

Professional” for example, returns a list of words including aerofoils, aloofness, frailness, psoralens, san serif and rap session.

The program's Wordsearch option lets you find dictionary definitions containing the words you specify. Searches can be refined using the Boolean operators AND, NOT and OR. For instance, entering “computer NOT language” results in a word list consisting of every entry where computer appears as part of the definition, except for those that also contain the term language.



With DUX Software's latest release, the OS/2 electronic bookshelf is looking a little more crowded at last.



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Finally there's the thesaurus. Under the default setting, it's linked to the dictionary in such a way that, once selected, it automatically looks up the synonyms for any term entered on the Dictionary screen. You can, of course, also enter words in the thesaurus separately as well. The results are displayed in three windows: one shows the word's definition, another shows the word's senses or meanings and the last lists synonyms for the meaning currently selected. Double-click on a different meaning and a new list of synonyms appears; double-clicking on a synonym brings up its definition.

While the contents of these on-line books are wonderful, there are a few significant things missing. The printed version of *American Heritage Dictionary* has a section called "Guide to the Dictionary" that, among other things, describes how the dictionary is put together, explains its abbreviations and usage terms and provides a pronunciation key. The program's help files and documentation explain only the interface, not the dictionary itself. A simple "sounds like" pronunciation key is needed at the very least—something some older text-based electronic dictionaries do have.

Interestingly, the software has one serious bug that, in a sense, obviates the need for a pronunciation guide. Many symbols are displayed incorrectly, including the diacritical marks used in the pronunciations supplied with each entry. Look up the word *facade* and you'll find another symbol where the cedilla should be. Look up cedilla and you'll see . . . the copyright symbol. The umlaut shows up as an inverted question mark and degree symbols for temperatures are also confused.

There are several other minor problems as well. The fonts assigned to most of the presentation controls and to the definition windows can be changed by the user, but not all of these changes can be saved. The control fonts, changed through the OS/2 Font Palette, are saved and restored the next time the program runs. But that's not true of changes made to the window fonts. If you're fussy about the program's appearance, expect to make changes every time you run it.

Another minor problem showed up under the Wordsearch option. Double-clicking on each entry in the search-results word list is supposed to bring up the word's definition, but this fails completely on heteronyms—words with identical spellings but different meanings—and on entries containing Indo-European roots.

The function of the definition window is not consistent with what an OS/2 or Windows user would expect. You should be able

DOT EXE

to use the elevator button to slide to the bottom of the definition, rather than mouse-clicking through each displayed "page."

And while there is some clipboard support, it's limited to copying single words into and out of the dictionary. A function mentioned in the documentation—that of copying the current word list to the clipboard—actually isn't available. And why not enable the copying of whole definitions? Granted, relatively few people would have a real need for this, but it's the sort of thing one would expect in an OS/2 program.

There is good news, however. According to a spokesperson at DUX Software, a patch correcting most of these problems—and adding some hypertext features—is forthcoming and will be made available through the DUX BBS (407-852-6138), Internet ftp site (<ftp.rivendell.com>), World Wide Web home page (<http://www.rivendell.com/dux>) and some commercial services. At this writing DUX is also on the verge of releasing another OS/2 reference product called the Columbia Concise Encyclopedia, which will have both images and text (but no sound or video).

At last, the OS/2 electronic bookshelf is looking a little more crowded.

Francis Reddy is a freelance writer living in Chattanooga, Tennessee. He runs the Space & Science Round Table on GENie, where he can be reached at frank.reddy@genie.geis.com.

AT A GLANCE

The Deluxe American Heritage Dictionary v. 1.1

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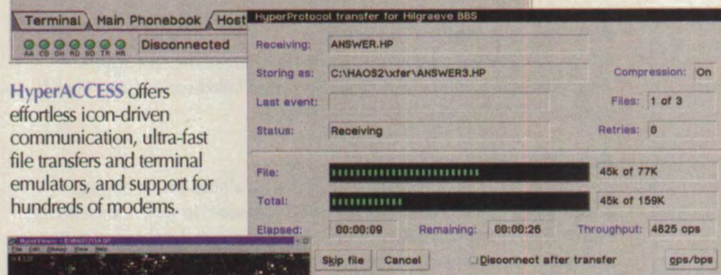
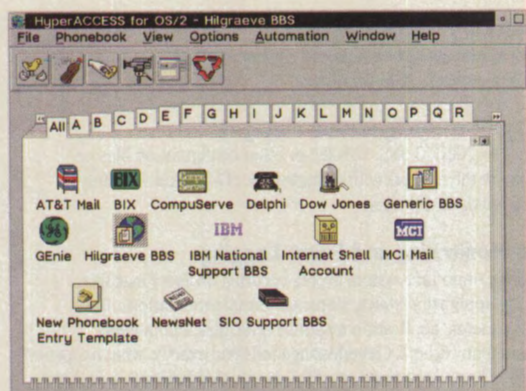


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DATA DEFENSE

BY KELLEY S. SHADDRICK

The world of computing is not a safe place anymore. With reports of Worms, Trojan Horses and Viruses making headlines every day, it's a wonder we still turn our computers on. Thankfully, along with all the bad guys turning out these nasty programs, there are good guys developing programs that counteract them. Two such programs are IBM's AntiVirus/2 and Central Point's Anti-Virus for OS/2.

IBM's AntiVirus/2

IBM's AntiVirus/2 arrived with one diskette and a short manual. For a change, I read the manual first and found it to be well written and produced. Up front it gives a quick overview of the program and then presents ideas for protecting your computer from a viral infection. The rest of the manual discusses installation and use of the program and includes an overview of viruses and antivirus programs, a list of files installed and suggestions for further reading.

Installation is easy and straightforward—I just used the default settings. Although the information is buried a few pages in, you do have the ability to scan your hard disk for viruses before installing the software. This is very important. As with most programs, you have the option of customizing AntiVirus/2 during installation. You can change the directory where AntiVirus/2 will be installed and whether it modifies systems files during the install. Also, you can specify whether AntiVirus/2 should run after the installation is completed and if you want the Shield DOS and automatic checking options enabled. Make sure that you select the option to Shield DOS. This option is crucial, as many viruses will attack your system through DOS. Shield DOS, depending on which options you select, will scan DOS memory when you start a session. It will let you know if it detects any virus-like activity while you're in your DOS session, and it will scan all of the files you open for viruses and will check diskette boot records when you access them. All of these areas are favorite hiding places for viruses.

Automatic checking will let your system do virus checks on its

IBM AND CENTRAL POINT PROVIDE A FIRST LINE OF DEFENSE IN THE BATTLE AGAINST DATA-DESTROYING VIRUSES.

own. You can set it to check during every boot, which takes about five minutes. Or you can specify a particular time and day it should do its check. If you specify a time other than at boot, AntiVirus/2 starts a monitor that runs in the background, triggering the automatic scan at the time you set.

After a brief initialization, a rather utilitarian program screen appears in the middle of the desktop. The first thing you'll see is a large Push Here button in the middle of the screen. If you select it right after install, AntiVirus/2 will use the default settings to scan your system. Across

the top of the screen are a selection of menu options that allow you to customize AntiVirus/2.

Besides the standard Help option, four other menu options are available. Check lets you select the media you wish to scan—either system (hard drives) or diskettes. Check also lets you specify all drives or specific drives/directories, all files or certain files and particular types of files to check for viruses.

Setup lets you set the automated check options, the Shield DOS options and whether you want to scan diskettes on shutdown. The Update option lets you get the latest virus information from IBM and updates your software with that data. The Log option lets you see what AntiVirus/2 has done every time you've run it, up to 50 times.

Once you have everything set, just click on the Push Here button and AntiVirus/2 does its thing. A word of caution: AntiVirus/2 saves all option changes and uses them for the next run. Therefore, if you change the options to scan only a specific directory, the next time you run the program it will only scan that directory and not your entire disk.

Central Point Anti-Virus for OS/2

Like AntiVirus/2, Central Point's Anti-Virus for OS/2 arrived with a single diskette and manual. The manual is laid out very much the same, except that right up front it tells you how to scan

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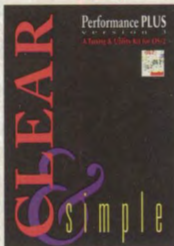
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DOT EXE

your system before installing the software. It then follows with basic information on the program, viruses in general and how to protect yourself. Also included are the installation and use instructions with a nice section on using the product on a network.

Installation is quick and easy with just a few prompts to ask where you want it installed and whether or not you want VWatch installed. VWatch is Central Point's DOS monitoring program. As with IBM's product, it is very important that you install this feature. When the installation is completed, you'll see a Central Point Anti-Virus folder on the desktop. Within are two programs: Central Point Anti-Virus and Central Point Anti-Virus Install. The install program lets you upgrade to new virus information.

Double clicking on the Anti-Virus icon starts the program and displays the main screen, which is more attractive than IBM's screen. It has pretty much the same five menu options: Scan, Options, Configure, Reports and Help. It also sports large option buttons for the more frequently used items. The only feature I didn't like was the program's insistence on checking the A: and B: drives on start up, reporting an OS/2 error message when it didn't find anything in the drive. I looked for options to tell it not to worry about those drives, but couldn't find any.

The first order of business when running the program is to specify which drives and directories it should search. You can click on the drives listed in the selection box or click on the Select Files button. Once you've selected the drives, directories and files, you return to the main screen and select the Scan menu option to either detect or clean viruses. Selecting Detect notifies you if a virus is found and then asks you what to do. Clean detects the virus and eliminates them automatically. After selecting the scanning method, Anti-Virus displays a status screen showing its progress.

Anti-Virus also has a Virus Analyzer function. This is an expert system that attempts to identify virus-like behavior to ferret out unknown viruses. The analyzer uses knowledge and reasoning instead of virus signatures to determine whether a program may be infected. The manual states that this option is for virus researchers and others testing the effectiveness of the virus expert system. As such it should not be totally relied upon. When Anti-Virus runs it puts small hidden files in each subdirectory that it uses to determine file-size changes, etc. If you don't like these files spread all over the disk, there is an option to remove them.

The remaining menu options are fairly straightforward. Two features that merit mention are the password option to secure

DOT EXE

your configuration options and the custom alert message. The alert message lets you set a standard message that appears when a virus is detected. You could put in a message like "Call the Helpdesk at extension 4357" so people would know what to do if a virus is found.

Both of these programs were easy to use and install. Both have good manuals that not only explained the workings of the two programs, but also delved into how you should handle a virus attack and protect yourself against one. Although I don't have access to a network, Central Point's product seems to be more friendly toward that environment, albeit the diskette drive problem I mentioned earlier needs to be fixed.

If you've used Central Point products before and liked them, add the Anti-Virus product to your desktop. If you like a more unobtrusive look, try IBM's AntiVirus/2 product. Either way, you'll end up with a safer computing environment. ♦

Kelley Shaddrick is director of networking and technical support at EBP Healthplans, Inc. He can be reached via the Internet at kshaddri@mr.net.

AT A GLANCE

IBM AntiVirus/2.2*

IBM AntiVirus Brand Team

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At press time, IBM was preparing to release a quarterly product refresh, AntiVirus/2.3, to address newly-discovered viruses. The program's operation itself remains essentially the same as the one reviewed.

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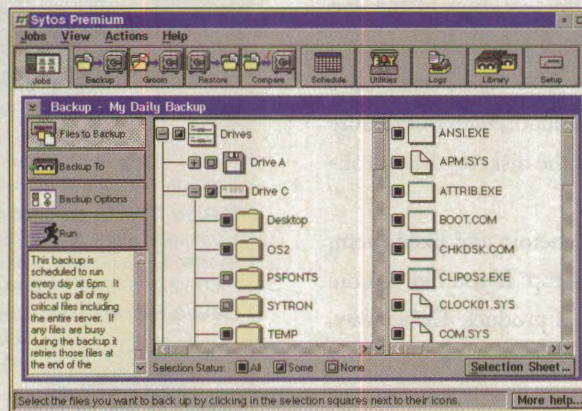
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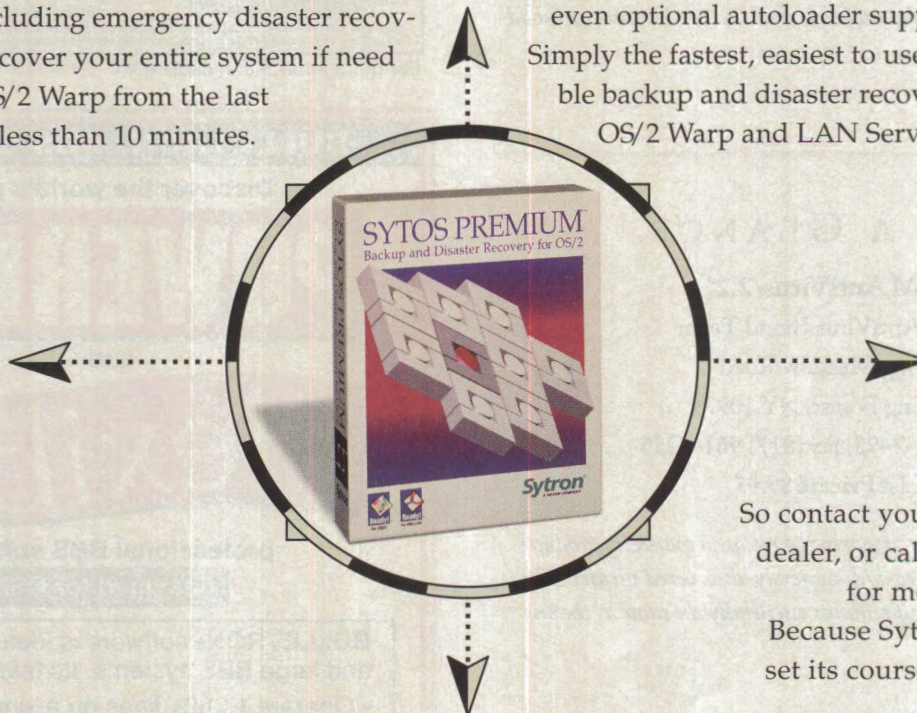
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HANDS ON

A SOLUTION FOR FILE BOY

FileStar/2 comes to the rescue of frustrated OS/2 users who need extensive control of their files.

BY GEOFFREY HOLLANDER

You can call me File Boy. In the course of my daily work I have to move, copy, rename, zip, unzip, view and edit my clients' files—through temporary and permanent directories and floppy diskettes. And every day OS/2's Workplace Shell has frustrated me because it has no file manager.

Apparently I'm not alone. Studies have shown that many OS/2 users have turned to the WIN-OS/2 file manager as a last—and often unsatisfactory—resort. Now though, thanks to SofTouch Systems, a simple, fast and powerful file manager is on the scene. FileStar/2 1.0 is a classic file manager with a familiar interface that is not only helpful to new users making the transition from the DOS and Windows environment to the OS/2 Desktop, but also offers real file power to advanced OS/2 users who need extensive control of their files.

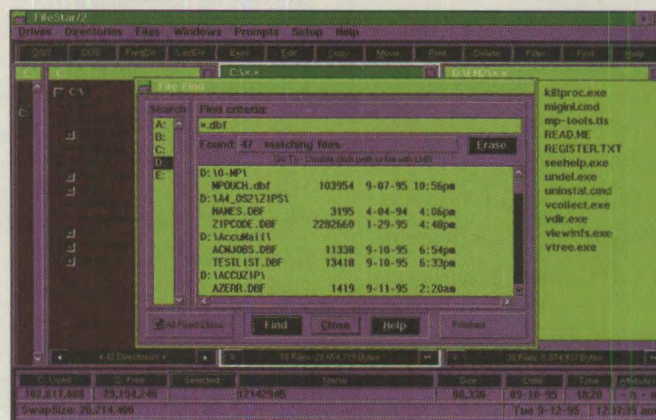
The FileStar/2 control center contains windows displaying available drives, current directory tree and files. Switching between the two file windows will automatically change the current directory display at the left, showing the correct tree for that drive. This handy feature lets you jump back and forth between active drives with a single mouse button click.

The program defaults to a vertically tiled window layout, with a drives window on the left, a directory window to the right and, successively, two more file windows to the right of that. If you're not happy with this way of looking at your files, simply change it to one of the other two predesigned window configurations: horizontally tiled file windows or cascaded windows. You can also design your own custom window pattern. At any time, you can

toggle through window modes by clicking on the Window Toggle push-button at the lower left corner of either file window.

FileStar/2 is a complete 32-bit, multithreaded OS/2 application that can simultaneously run different operations in each of its two windows. For instance, copy a set of files from one directory to another while archiving files in a third directory—all at the same time. This powerful utility also provides full drag and drop capabilities, permitting the user to move or copy files between windows as well as other WPS objects (i.e., drag a file to a printer or the shredder).

A Data Panel along the bottom of the screen provides updated information about the selected drive volume, directory and file(s) including: Name, Size, Date Stamp, Time Stamp and Attributes. There is also a dynamic Message Window at the bottom to the left. When there is no operation in progress, you can click the right side of the Message Window to clear any



FileStar/2 offers advanced OS/2 users real file power and eases the transition to OS/2 for Windows users.

messages or click on the left side to display the SWAPPER.DAT file's current size.

Displayed messages are stored by FileStar/2 and can be reviewed in a Message History Dialog box. Special toolbar buttons along the top of the status area will help you change the Name, Attributes and Date or Time Stamps of any selected file(s).

Located immediately above the main window section, a handy Button Bar extends across the top of the FileStar/2 display. Predefined buttons provide quick access to these commonly executed actions: OS/2 (Window), DOS (Window), FreDir (Frequently Used Directories defined by the user), LastDir (Last Directories Used—a list of the most recently accessed

HANDS ON

directories), Edit, Copy, Move, Print, Delete, Filter, Find and Help. Copy, Move, Delete and Filter operations are window dependent, acting on directories and files in FileStar/2's active windows. Based on your preference, the Button Bar may be displayed or hidden.

SofTouch includes InfoZip's Zip/Unzip archiving utility in the FileStar/2 package for easy access to file compression. A quick setup in the FileStar/2 Settings notebook tells the program where to find the zip/unzip utilities. The ZipView Window is easily activated by clicking on any .ZIP file. Important information such as: File Name (within the zip file), Size (uncompressed file size), Date (last write date), Time (last write time), Ratio (percentage of compression), ArcSize (compressed file size) and Method (of compression) is conveniently displayed. For the most part, FileStar/2 handles this phase of file management well; unfortunately, however, it only supports compression via InfoZip's product. To give more user flexibility, FileStar/2 should also be able to support compression using other well-known utilities and other platforms (i.e., PKZIP for DOS).

Associations are limited in this application as well. Although you can associate an editor, file viewer, image viewer and the InfoZip utilities with certain file extensions through the Settings notebook, it also would be nice to be able to configure associations on the fly. Examples: .DBF with Alpha Four or DBExpert, DeScribe files (no extension) with DeScribe, etc. A configurable Button Bar and Menu system would also be valuable additions to FileStar/2.

Even with these caveats, however, FileStar/2 is the answer to this File-Boy's Workplace Shell dilemma. ♦

Geoffrey Hollander is the principal of MailPouch, a computer service bureau based in Lake Oswego, Oregon, that serves the direct mail marketing industry. He can be reached via CompuServe at 75202,3527.

AT A GLANCE

FileStar/2

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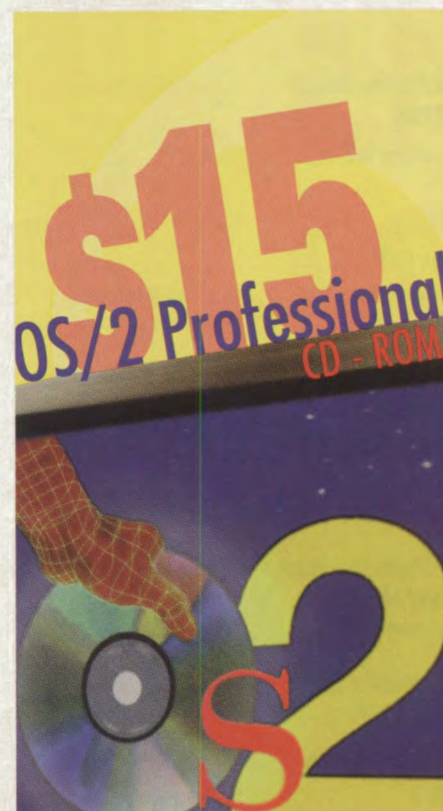
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DESKTOP MANAGERS

DeskMan/2 v1.51b

\$46.00

Item number 187 MSR \$79.95

Development Technologies
Award-winning, fast, flexible, multi-function tools for all personal and corporate OS/2 users. Enhance productivity and ease of use with powerful drag and drop virtual desktops and Workplace Shell Extensions. Packed with powerful, easy to use features, including security and window management; GUI and API (including LAN and CID support) to manage and backup WPS objects; configuration and desktop snapshot facility; more!



OS/2 Express promises to
match or beat nationally
advertised prices for
OS/2 software we carry.

We guarantee our price for up
to seven days after order. Details, page 48.

DESKTOP MANAGERS

DeskMan/2 Productivity Pack

\$74.00

Item number 474 MSR \$99.95



Development Technologies
The DeskMan/2 Productivity Pack includes DevTech's award-winning DeskMan/2 v1.51b and five leading edge productivity tools including DCF/2 Lite, The Graham Utilities (Special Edition), Relish v.2.12 and CPU Monitor Plus (Special Edition).

The package includes a FREE upgrade (+S&H) to DeskMan/2 v.2.0 when it becomes available and money-saving coupons for product upgrades. The DeskMan/2 Productivity Pack has been called nothing less than the "OS/2 survival kit"!

GammaTech Power Pack for OS/2

\$49.00

Item number 110 MSR \$69.95

SofTouch Systems, Inc.
Power Pack is a PM-based application that launches applications and executes lengthy keystroke operations with a couple of function keys. It also includes a sophisticated editor to create, delete or modify OS/2 INI files and the Extended Attributes associated with your data files. Supports both ASCII and hex. Enhanced screen saver with "hot" corners included with this offer.



Object Desktop

\$83.00

Item number 501 MSR 99.95

Stardock Systems

Object Desktop takes advantage of OS/2's advanced workplace shell interface and gives it many features users have been asking for years. Includes an object oriented file manager called the Object Navigator which allows you to use data or run many programs directly from a compressed archive (such as ZIP).

*CID enabled install available

OS/2 Essentials

\$27.00

Item number 368 MSR \$39.95

Stardock Systems

OS/2 Essentials is a mini-application suite with an advanced file manager, a screen saver with green monitor support, a workplace shell trash can, a directory space grapher, a taskbar, a multimedia arcade game and more. Most of the applications can use MMPM/2, are all multithreaded and have slick PM interfaces.

PM Assistant

\$99.00

Item number 183 MSR \$129.00

Utilis, Inc.

A comprehensive and integrated suite of utilities including hot-key access to applications, automatic application placement on screen, keyboard macros, task scheduling, screen saver and password protection.

DESKTOP MANAGERS

PrntScr

\$105.00

Item number 154
MSR \$115.00
MITNOR Software
4 Integrated Utilities—one Low Price! PrntScr copies any portion of any desktop image. It imports, exports, views and prints clipboard images and text; and has nine screen saver displays and a date/time display. OS/2 2.x and 1.3 versions are included.

Secure Workplace for OS/2

\$49.00

Item number 165
MSR \$59.95
Syntegration
The Secure Workplace for OS/2 offers workstation security, extended control of the Workplace Shell, and a set of workplace management utilities no user should be without.

10-Station Enterprise Edition:

\$504.00

Item number 166
MSR \$549.95

SkyScraper™, Desktop Manager for OS/2

\$37.00

Item number 299
MSR \$49.00
Binar Graphics, Inc.
Realize the full power of OS/2 with SkyScraper. This application gives practically unlimited screen real estate. Virtual desktops at a single click; all applications run maximized on their own desktops! Launchpad and many other features.

System Commander For OS/2

\$69.00

Item number 491
MSR \$99.95
V Communications
Now you can try Windows 95 and keep your current OS. System Commander makes it possible to have as many as 100 operating systems on a single PC. A menu of installed operating systems appears at boot time. Select the OS you want, and System Commander does the rest!

System Sounds for OS/2

\$46.00

Item number 252
MSR \$59.00
BOCASoft
System Sounds gives your computer a voice by associating audio with system events and keystrokes. Includes more than one megabyte of professionally recorded sound effects in Microsoft audio format. Requires an audio card supported by MMPM/2 (included with OS/2 2.1).



WipeOut V2.0

\$44.00

Item number 245
MSR \$49.95
BOCASoft, Inc.
WipeOut V2.0 is a 32-bit screen saver which includes GREEN Monitor Support, more new savers and slideshow features, easier to use notebook interface, and better graphics, sounds and music. WipeOut is now SOM Compliant. Full password protection and After Dark support are included.

DESKTOP MANAGERS

XFolder

\$21.00

Item number 292
MSR \$49.95
The Desktop Company
XFolder arranges and aligns desktop and folder icons, customizes icon spacing, and saves and restores favorite layouts. It allows selection of row, column or perimeter layout, positioning for all or selected icons, multiple levels of "undo."

FILE MANAGERS

"Bloodhound"

sale price \$85.00

Item number 215
MSR \$300.00
IBM
"Bloodhound" (aka SearchManager/2) is probably the most powerful text finding tool available for a PC. Once files are indexed, this native 32-bit OS/2 utility and its Thesaurus search any file in five languages, and will find and retrieve files containing the words. linguistic variations and synonyms requested-at lightning speed!

GammaTech File Secure for OS/2

\$29.00

Item number 111
MSR \$39.95
SoftTouch Systems, Inc.
Using the latest data encryption techniques available*, GammaTech File Secure protects sensitive data from unauthorized viewing. Files are encrypted using unique file keys that cannot be replicated. Data can be obliterated using techniques that conform to U.S. Department of Defense 5220.22-M specifications. (*This product's use of Data Encryption Standard algorithms means its sale, resale, or use outside the U.S. and Canada is expressly prohibited).

LinkRight 1.1 (w/cables): \$99.00

Item number 113
MSR \$189.00
Rightware Inc.
This parallel/serial port file transfer utility package for OS/2 includes three versions: Presentation Manager, OS/2 command line, and DOS. Copy files to/from OS/2 and to/from DOS systems retaining EAs and long file names. Compatible with LapLink cables.



LinkRight 1.1 (w/o cables): \$67.00

Item number 114
MSR \$110.00

LinkRight for LANs

\$260.00

Item number 403
MSR \$395.00
Rightware Inc.
File transfer for networks. It Clones complete systems or just a few files. Uses NetBIOS Multitasking to send one to many for multiple clones. 100 user license.

FILE MANAGERS

Linkwiz

\$99.00

Item number 239
MSR \$149.00
PCX
Linkwiz is an OS/2 and DOS/Windows File Transfer Utility with an up-to-2 mbps transfer rate over parallel cable. It's extremely easy to install and use. Native OS/2 code supports Presentation Manager, extended attributes, long file names and 32-bit I/O. Includes both a parallel and serial cable.



OS2TREEPM Lite

\$25.00

Item number 141
MSR \$27.00
(OS/2 File Management Solutions)
What XTREE Gold is to DOS - What Norton Commander missed...and more! Dynamic graphic file management for OS/2 supporting both Fat and HPFS file systems. Built in ZIP support, GREP search and replace capabilities, Extensive file search functions and calls ANY EDITOR or VIEWER.
**now includes both a character mode interface and a pm interface.



OS2TREEPM Pro

\$64.00

Item number 142
MSR \$79.00
Includes Lan drive, mainframe file upload/download support, and one year of upgrades and product support.

SoftTouch File Star

\$55.00

Item number 362
MSR \$99.00
SoftTouch Systems, Inc.
SoftTouch File Star manipulates all your disk files with a drive window, a directory window and two file windows within a single session. It browses files with any browser or viewer, zips files to save space, monitors free space, swapper size and RAM size dynamically.



SoftTouch File Star Ten Pak \$449.00

Item number 367
MSR \$799.00
SoftTouch Systems, Inc.

ZIPMAN for PKZIP/UNZIP for OS/2

\$33.00

Item number 345
MSR \$39.95
Software Builders, Inc.
ZIPMAN can miew more than one ZIP file at a time, and drat and drop files to be zipped. Its easy-to-use graphical interface also view or executes any file in a ZIP file without first having to extract it.



OS/2 Express promises to match or beat nationally advertised prices for OS/2 software we carry. We guarantee our price for up to seven days after order. Details, page 48.

JOB SCHEDULING

ATS for OS/2 \$319.00

Item number 181 MSR \$349.00
MHR

Advanced Task Scheduler for OS/2 is a production job scheduling utility that eliminates the need for human intervention during routine batch processing. ATS allows complete control over how and when any scheduled programs will run.

Chron \$92.00

Item number 184 MSR \$99.00
Hilbert

Chron is an OS/2 PM application that will schedule other OS/2, DOS or Windows applications to run at a specified time and frequency.

Job Scheduling Server for OS/2 \$750.00

Item number 376 MSR \$960.00

MicroWork, Inc.

The package automates unattended job scheduling for NOVELL and IBM LANs. Schedules multiple OS/2, DOS/Windows jobs on any OS/2-based network node. Conditional job scheduling, sophisticated calendar, job logging and much more.

Network Version \$1,350.00

Item number 377 MSR \$1,700.00

UTILITIES • DISK

EZP2-Easy Pro Tools for OS/2 sale price \$29.00

Item number 373

MaxWare, Inc.

A set of utilities for routine works. Unleash the power of OS/2 Named Pipes: combined with UNIX comand line (30 commands), EZP2 provides an extremely productive development environment. A real winner, for novices as well as professional users.



GammaTech Utilities for OS/2 Version 3.0 \$99.00

Item number 109 MSR \$149.00
SofTouch Systems, Inc.

Performs FAT and HPFS optimization, file undelete and desktop backup. PM and command line utilities perform disk analysis, recover corrupted files, back up/repair boot sectors and include a sector editor. Drives greater than 2 GB supported.

IBM AntiVirus 2.2

IBM

IBM AntiVirus offers you the security of knowing that there's an effective barrier between your PC and any viruses that attempt to infect it. It is today's premier anti-virus solution. IBM Antivirus detects over 6,000 viruses and their variants.

UTILITIES • DISK

Desktop Edition \$41.00

Item number 233A MSR \$49.00
(single user)

Desktop Additional Licences \$9.00

Item number 233L MSR \$15.00

Enterprise Edition \$879.00

Item number 496A MSR \$995.00
(50-user pack)

Enterprise Additional Licences \$660.00

Item number 496L MSR \$749.00
(50-user)

J&J Utilities for OS/2 \$37.00

Item number 112 MSR \$49.95

J&J Computer Consulting

J&J Utilities v 1.5 is a collection of more than 20 utilities including file locate, HPFS and FAT file defragmenters, process control, automatic job scheduling, and more.



PartitionMagic Personal Version \$64.00

Item number 356 MSR \$69.95

Power Quest

PartitionMagic 2.0 for OS/2 and DOS is the world's only software that lets you visually shrink, expand, and move FAT and HPFS partitions - including the cluster sizes - without destroying data. This amazing software also converts FAT partitions to HPFS with the data in place. A several-hour project is reduced to a simple operation that takes only minutes.

PartitionMagic Professional Version \$530.00

Item number 447 MSR \$795.00
unlimited site license.



SpaceMap 1.2 for OS/2 \$39.00

Item number 431 MSR \$59.95

Capstone Software

Cleans up overcrowded disk drives, including LAN drives. Summarizes disk space usage by directory, including sub-directories. Powerful file search and file management facilities. 32-bit PM.

Stacker 4.0 for OS/2 and DOS \$153.00



Item number 337 MSR \$199.00

Stac Storage & Communications

Stacker puts average of 2.5 times as much data on your disk with the new Stacker 4.0 for OS/2 and DOS. And it's OS/2 Warp compatible.

UTILITIES • DISK

ZipStream for OS/2 2.1 \$66.00

Item number 295 MSR \$79.95

Carbon Based Software

ZipStream is an OS/2 Installable File System (IFS) that mirrors access to existing OS/2 File Systems and simultaneously provides automatic transparent file compression and decompression services.

UTILITIES • FONTS

The OS/2 Font Pack \$34.00

Item number 461 MSR \$49.95

Bitstream

The Bitstream 500 Font CD is the perfect typographic resource for OS/2 Warp users. The CD has over 500 professional-quality text and decorative typeface designs from Bitstream's award-winning library in both PostScript Type 1 and TrueType formats. Providing both formats means documents created in OS/2 (using the PostScript fonts) can maintain their exact look when viewed in Windows (using the TrueType fonts.)

UTILITIES • SYSTEM

CPU Monitor Plus \$84.00

Item number 108 MSR \$129.95

BonAmi SoftWare Corp.

A premium performance and analysis package for OS/2. CPU Monitor Plus permits real-time monitoring and control of CPU, RAM, disks and ports, and program and thread control for all OS/2, DOS and Windows programs.



OS/2 RM Lite \$67.00

Item number 335 MSR \$99.00

C.O.L. Systems Inc.

OS/2 RM Lite is the OS/2 analyst's professional tool for monitoring performance and reporting on CPU, IRQ, Memory, Logical Disks, Physical Disks, Paging, Swapping, FAT/HPFS/HPFS386 caches, Applications, Threads, Files, IBM Lan Server and Lan Requester. Uses OS/2 REXX for reporting. Certified OS/2 and OS/2 LAN Ready.

**TO ORDER,
CALL 1-800-OS2-KWIK
(1-800-672-5945)**

FAX (612) 823-6267

**INTERNATIONAL
1-612-823-6255**

UTILITIES • SYSTEM

Performance Plus for Warp \$27.00
Item number 330 MSR \$39.95
Clear & Simple, Inc.



A system-tuning and utility kit for OS/2 Warp which Features a new simple GUI, DOS/Windows application optimizer, bitmap viewer, swap monitor with audible warning, and more, including bonus OS/2 bitmaps.

PM Patrol \$66.00
Item number 430 MSR \$99.95
MSR Development

PM Patrol is a resource management program for OS/2. It includes a laptop battery monitor, full scheduler, the ability to kill hung processes and a status bar that provides vital system information.

SofTouch UniMaint 4.0 \$71.00
Item number 435 MSR \$99.00
SofTouch Systems, Inc.

UniMaint 4.0 uninstalls OS/2 applications safely and completely; removes executable files, application directories, DLLs, INI file entries and associated help and information files. Portable desktop backup included.



SpellGuard \$19.00
Item number 500 MSR \$25.00
2 Rud Software

The spell checker for all apps! SpellGuard is an as you type spell checker for PM, OS/2, DOS and WIN-OS/2 windowed programs. A must have for communications apps users!

VLSort Version 3 \$99.00
Item number 480 MSR \$119.00
Mystic Software

As a foundation for future features and enhancements, VLSort brings extra sorting power to OS/2 systems. Version 3 features Command line or Parameter file operands with override capabilities, Merge sequence checking, Distribution across multiple disks, easily alterable sort priority, Alternate sequence tables, and more. Sorts up to 64 Alpha, Binary, Character, Floating point, Packed decimal, Zoned decimal, Signed binary integer or unsigned binary integer fields in ascending or descending order.



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We guarantee our price for up to seven days after order. Details, page 48.

COMMUNICATIONS

Advanced Voice Professional V 2.0

Sunrise Systems

Advanced Voice Professional provides a development platform for interactive Voice Response/Fax applications. The AIM scripting language is included for easy and fast integration of voice/fax/database applications. Virtually an unlimited range of applications are possible.

2 Port \$278.00
Item number 421 MSR \$295.00

4 Port \$472.00
Item number 422 MSR \$495.00

8 Port \$686.00
Item number 423 MSR \$695.00

12 Port \$810.00
Item number 424 MSR \$895.00

24 Port \$686.00
Item number 425 MSR \$1150.00

Communications Manager/2 v 1.1.1 \$320.00
Item number 280A CD ROM MSR \$369.00

Item number 280B 3.5" Diskettes
IBM

Comprehensive communications processor includes improved 3270 and 5250 terminal emulation and more APPC functions, plus features such as Data Compression and Distributed Feature Workstation.

EXTRA! for OS/2 v 2.0 \$309.00
Item number 358 MSR \$425.00

Attachmate

EXTRA! for OS/2 v 2.0 is a 100-percent 32-bit, object-oriented, multithreaded emulator, with extensive 3270 and APPC/CPI-C support and full integration with the Workplace Shell.

FaxForward \$2,495.00
Item number 206 MSR \$3,850.00

Computer Systems Integration, Inc.

FaxForward is an Interactive Voice Response/Fax communication system designed to provide a software development platform for creating integrated voice, fax, database and host-supported applications.

eXceed for OS/2

Hummingbird

Hummingbird's eXceed/OS2 PCX server software allows IBM OS/2-based PCs to display applications from X Windows hosts alongside DOS, Windows and OS/2 applications.

Single User Version \$395.00
Item number 471 MSR \$545.00

COMMUNICATIONS

5 Pack \$1,950.00
Item number 472 MSR \$2,315.00

10 Pack \$3,495.00
Item number 473 MSR \$4,360.00

FaxWorks for OS/2 \$99.00
Item number 102 MSR \$149.00

SofNet, Inc.

Faxes from any OS/2, Windows or DOS application via a Class 1, Class 2 or CAS fax modem. The software also includes annotation tools to allow electronic markups, fax broadcasting and multiple channel options.

10-user LAN version \$507.00
Item number 103 MSR \$699.00

GammaTech Internet Relay Chat \$39.00
Item number 490 MSR \$49.95

SofTouch

Use OS/2's PM interface with the Internet and GammaTech IRC! Includes menus and customizable toolbars for issuing IRC commands—no more command line interfaces! GT-IRC is a multiuser, multichannel chat network which enables you to have real-time conversations all over the world. Users can talk in groups and in private conversations concurrently. Full documentation provided including an introduction to the Internet Relay Chat facility.

Golden CommPass \$65.00
Item number 469 MSR \$69.00

Creative Systems

Golden CommPass is a specialized OS/2 communications program designed to fully automate access to CompuServe forums, libraries and mail. It saves you money by significantly reducing connect time when transmitting and receiving messages. Technical support is available via telephone or on the CompuServe IBM OS/2 Information Exchange.

HODstar™ Pager (single license) \$60.00
Item number 255 MSR \$85.00

HODstar™ Support Solutions

Permits users to send messages quickly and easily to today's standard pagers. Also creates standalone programs to add pager functionality to any OS/2 batch file, REXX program and commercial application. Supports all AT-compatible modems. Also available in site-wide and "unlimited use" license.

HyperACCESS/5 V3.1 \$129.00
Item number 161 MSR \$199.00

Hilgraeve

Award-winning async comm program includes virus protection, host mode, on-the-fly unzipping, 12 fast file transfer protocols, 17 terminal emulations. PC Magazine Editor's Choice.

COMMUNICATIONS



HyperACCESS for OS/2 \$91.00

Item number 503 MSR \$129.00
Hilgraeve

HyperACCESS for OS/2 - the complete, retail version of HyperACCESS Lite, the easy-to-use OS/2 Warp terminal program. HAOS2 is on-line ready, resource rich, and novice friendly.



KopyKat v1.2 \$129.00

Item number 162 MSR \$199.00
Hilgraeve

Graphical OS/2 remote control. Displays the remote desktop in a window on your OS/2 system. Connects through networks or modems. New V1.1 supports fast file transfer and TCP/IP.



NetOp for OS/2 \$280.00

Item number 481 MSR \$495.00
Markham Computer



Designed to save time and dramatically simplify LAN and WAN administration, NetOp for OS/2 Version 5 allows authorized personnel to remotely access and control the screen, keyboard and mouse of any OS/2, Windows or DOS PC workstation or file server on the network.

PMCOMM 2.32 sale price \$71.00

Item number 105 MSR \$99.95

Multi-Net Communications
Pmcomm is a full-functioned, 32-bit, GUI, PM communications program. It supports complete key re-mapping, REXX scripting, host mode, pop-up menus, various terminal emulations and file transfer protocols.

PM2YOU v 2.1 \$190.00

Item number 140 MSR \$255.00

Ridax
Control your OS/2 Desktop and Presentation Manager or character mode programs remotely from another OS/2 or Windows machine via dial-up modems, NetBIOS, APPC, TCP/IP, SPX or Named Pipes.

WinTerm—Windows Terminal Option for PM2YOU, v.2.4 \$34.00

Item number 482 MSR \$41.00

Ridax
With the WinTerm terminal option for PM2YOU, you can connect to an OS/2 host running PM2YOU and remote control the entire Presentation Manager graphical desktop. WinTerm runs with Windows 3.0, Windows 3.1 and Windows 95.

Post Road Mailer

Innoval System Solutions, Inc.

Post Road Mailer is a new e-mail program for OS/2. It is

COMMUNICATIONS

available in two editions: the Green Edition for people who send e-mail through the internet, and the Blue Edition for users of IBM's Office Vision/VM electronic mail facility known as PROFS. Features drag-and-drop filing, multiple address books, sorting and subject threads for mail folders, filtering of inbound messages and MIME compliant file attachments.

Green (Internet) Version \$49.00

Item number 387 MSR \$59.00

Blue (PROFS) Version \$64.00

Item number 388 MSR \$79.00

RhinoCom Standard \$169.00

Item number 336 MSR \$199.00

Rhintek
Advanced Workplace Shell technology, easy customization through extensive macros, REXX scripting and native OS/2 code make RhinoCom a powerful tool for the sophisticated communications user.

RUMBA for the Mainframe OS/2 version 3 \$365.00

Item number 286 MSR \$400.00

Wall Data Inc.
Easy-to-use OS/2 to Mainframe connectivity with drag and drop file transfer and paste linking of host and PC applications. Interface support for MS SNA Server, APPC and CPI-C 2.0, Novell Netware for SAA and TCP/IP.

TE/2 1.30 \$39.00

Item number 107 MSR \$49.00

Oberon Software
Full-featured OS/2 telecommunications and terminal emulation package; supports ANSI, VT100, IBM3101, and TTY emulations, and most common file transfer protocols.

UltiMedia Mail/2 \$75.00

Item number 247 MSR \$99.00

IBM
IBM's new client/server OS/2 e-mail is a PM application built on SOM and TCP/IP. It supports multimedia attachments, integrates with Time and Place and Visual Document Library and supports both VIM and MAPI.

ZOC \$89.00

Item number 432 MSR \$95.00

BMT Micro
ZOC is a PM terminal program for OS/2. ZOC supports REXX scripting, X/Y/Zmodem, Kermit, and CIS-B file transfer protocols, auto-logon script generator, TTY, ANSI, and solid VT-102 emulation, multiple phone books, complete cost accounting, and much, much more.

PRODUCTIVITY

CA SuperProject \$489.00

Item number 208 MSR \$649.00

Computer Associates
CA SuperProject is a complete set of project management and presentation tools that are easy to use and learn.

IBM WorkGroup

IBM
IBM Workgroup is an integrated palette of modular, customized office functions ranging from robust E-mail and document management to workflow. Package includes: UltiMail, IntelliAgent, Personal and Enterprise Address Book, Time & Place/2 and FaxRouter/2.

IBM WorkGroup CD-ROM \$119.00

Item number 392 MSR \$179.00

IBM WorkGroup CD-ROM \$509.00

Item number 393 MSR \$789.00

(5-user pak and 1 server, includes DB2/2 single user)

IBM WorkGroup Additional Users CD-ROM \$399.00

Item number 394 MSR \$615.00

(5-user pak; does not include DB2/2)

IBM WorkGroup Additional Users CD-ROM \$719.00

Item number 395 MSR \$1159.00

(10-user pak; does not include DB2/2)

Lotus Notes 3.3 for OS/2 \$399.00

Item number 476 MSR \$407.00

IBM
The industry's top groupware application environment that allows your workgroups to collect, organize, share and distribute information over LANs and dial-up lines. Call for prices on other Lotus Notes products.

Volume License Savings!

IBM Software Advantage For Workstations

Now when you order through OS/2 Express, you can take advantage of "Forecast Advantage" or "Commitment Advantage" licensing plans! A little forethought saves you a lot of money with IBM Software Advantage For Workstations!

PRODUCTIVITY

Lotus SmartSuite Version 2.0 for OS/2 \$287.00

Item number 366 MSR \$309.00
IBM

The applications in the SmartSuite for OS/2 take full advantage of 32-bit technology and the object-oriented OS/2 Workplace Shell to provide a unique, unparalleled combination for simultaneously performing multitasking and multithreading.



MESA for OS/2 V2.0.3

MESA for OS/2 is an object-oriented 32-bit, 3-dimensional spreadsheet. Offers real-time data feeds, DOE, file import/export including WK1, WK3, WK4 and XLS (Excel 3 & 4) files, multithreading, Workplace Shell interaction and REXX scripting.

Single User sale price \$86.00

Item number 328 MSR \$95.00

Educational Package

sale price \$63.00

Item number 411 MSR \$70.00

Technical Support Package \$89.00

Item number 412 MSR \$99.00

One year technical support in addition to the initial 90-day period included with the purchase of MESA for OS/2.

Person-to-Person for OS/2 \$177.00

Item number 277 MSR \$2190.00
IBM

It's the ultimate in PC interactivity! Person-to-Person permits up to five users to interact with each other—in real-time—while viewing the same screen contents. Share, annotate and print to common window contents while discussing the work over the phone.

Power Translator Professional for OS/2 sale price \$99.00

MSR \$199.00

Globalink, Inc.

Item number 116A—German

Item number 116B—French

Item number 116C—Spanish

Unite CD-Maker \$219.00

Item number 378 MSR \$249.00

Cirrus Technology

Unite CD-Maker is a Workplace Shell enabled mastering product for OS/2 Warp. Use it to create CD-ROMs.



GRAPHICS

ColorWorks for OS/2 \$318.00

Item number 374 MSR \$495.00

SPG, Inc.

ColorWorks for OS/2 is a high end, native 32-bit image processing, painting and editing program of unmatched power and speed. It features Configurable Tools, Painting abilities, Photo Retouching Effects and unique Filter Labs. Its Special Effects, Warping and Distortion Effects, and abilities to edit images in a compressed state and to spread work across multiple processors yields the most power-packed program available to the computer artist or designer.



CorelDRAW! 2.5 for OS/2 2.0 \$139.00

Item number 100 MSR \$199.00

Corel Corporation

One 32-bit illustration package does it all: CorelDRAW!, CorelCHART, and CorelPHOTO-PAINT in one box, all optimized for OS/2. Plus a bonus CD-ROM with more than 12,000 clip art images and 250 fonts.



GALLERY 2 \$75.00

Item number 417 MSR \$99.00

Corel Corporation

Corel GALLERY 2 includes 15,000 clipart images plus a state-of-the-art Visual Multimedia File Manager, 500 photos, 500 fonts, 75 sound clips and 10 video clips.

CAD/3X \$95.00

Item number 172 MSR \$495.00

JMI

CAD/3X is an easy-to-use CAD package. Yet it offers you more professional 2D features than any CAD under \$1,000. Recommended for plans, sketches, layouts, and more.

Symbol Files for CAD/3X \$20.00 each

MSR \$29.00

Architecture Item number 311

Electrical/Electronic Item number 312

Piping/Welding Item number 313

HVAC Item number 314

Mechanical Item number 315

Landscape Item number 316

SYMBOLS BUNDLE \$70.00

Item number 317 MSR \$99.00

Save and receive *all six files!!!*

GRAPHICS

IBM CAD Draws Cape Cod \$12.00

Item number 318 MSR \$15.00

SKPSolutions

This 75-page booklet takes you step by step through the process of drawing the floor plan of a mid-size home, enabling you to understand the process and use the tools and techniques available with IBM CAD/3X.



GraphiC OS/2 \$395.00

Item number 204 MSR \$495.00

Scientific Endeavors Corporation

GraphiC is a library of "C" routines for creating every sort of technical plot. High-resolution vector format for publication quality.

DEVELOPMENT TOOLS • C

Client Server: The 10% You Need To Know \$210.00

Item number 323 MSR \$249.95

by Randy Langel

IBM

The book or multimedia CD-ROM are in-house consultants that explain all the major business, organizational, political, process and technology issues of Client/Server. Includes common success factors and rules of thumb.

C/C++ 10.5, CD-ROM Edition

Watcom

Watcom C/C++ delivers a multi-platform, cross-platform development system for 16- and 32-bit development. Target platforms include Windows NT, Windows 95, Windows 3.1, OS/2 Warp, extended DOS and more. New features include: Blue Sky's Visual Programmer, Windows 95 Ready and MFC 3.0 for Win32.

Full Version \$333.00 (CD-ROM with on-line documentation)

Item number 212A MSR \$350.00

C/C++ 10.5 Competitive Upgrade \$186.00

Item number 212B MSR \$199.00

CEnvi for OS/2 \$55.00

Item number 156 MSR \$69.00

Nombas

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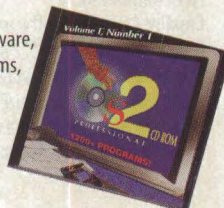
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Product News for the OS/2 User

SCOOPS

Linking Lotus

One of the first products resulting from the IBM/Lotus merger—the MQ Series Link for Lotus Notes—will receive additional platform support and is due to be rolled into MQ Series for OS/2 by the end of this year.

MQSeries Link for Lotus Notes, a software development kit that has been available for OS/2 and AIX, allows corporate users to access and retrieve data from mainframe databases or other host-based systems directly through Lotus Notes, in real time,

without tampering with the integrity of the host data. These host systems include DB2 databases, Customer Information Control System transaction-processing applications and VAX/VMS platforms.

The link, which Steve Craggs, manager of IBM's MQ Series business unit in Hursley, England described as a "piece of code that sits on the Notes server," is a Notes server task that translates data between Notes and a set of APIs. The translation, con-

necting, delivery and reply from the target system are all controlled by the link technology. The link processes data and return codes from the host system and notifies the user when the information arrives.

MQSeries link also works for mobile users. "If a salesman, for instance, runs out of [wares] in a local site, he clicks on the icon for the host site, and it tells him, 'oh, yes, I've got six left,' and then updates his system," said Craggs.

Additional features will

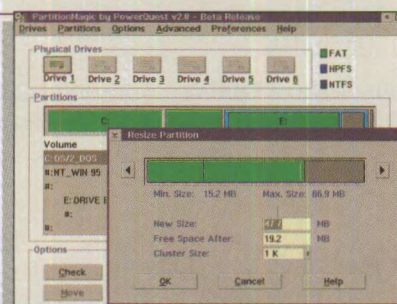
include support for Lotus-Script so users can incorporate data into spreadsheets using such programs as 1-2-3. Also, host-initiated batch data transfer will be added, enabling host systems to initiate scheduled downloads of data to the Notes server.

Prices for the MQSeries link were not available at press time. However, Craggs said once the link is rolled into the IBM MQSeries middleware it will essentially be "free" with MQSeries. List price for IBM MQSeries is \$495.

New Products

More magic

PowerQuest is poised to release PartitionMagic 2.0 this quarter. The new version allows users to reclaim hundreds of megabytes of space traditionally wasted on high-capacity hard drives by resizing maximum allocation units, or clusters. PartitionMagic 2.0 also completely replaces the FDISK and FORMAT utilities in DOS with a simple graphic utility and offers more security for hiding or exposing partitions. In OS/2, the program continues the



Partition Magic 2.0 now resizes allocation units.

ability to convert FAT partitions to HPFS.

PartitionMagic 2.0 is available for DOS, Windows, Windows 95 and OS/2. PowerQuest is offering three licenses for the product: a personal license for two machines, a professional license for MIS

managers and system administrators and a corporate site license. Prices are \$69.95 for the OS/2 and DOS Personal License and for Windows 95, \$49.95 for a DOS and Windows Personal License and \$495 for a Professional License offering DOS, Windows and OS/2 support.

PowerQuest Corporation, 1083 North State Street, Orem, Utah 84057. (801) 226-8977, fax (801) 226-8941. Internet: <http://www.powerquest.com>.

Mind tools

MindWire, an online services

platform that allows the user to create modem, network and Internet connectivity options soon will be available for OS/2. Equipped with E-mail, messaging, chat and classified ads options, MindWire provides a Database API and Developer's Guide for creating third party client/server applications using any Windows programming tool.

MindWire will run as a native OS/2 application on either Intel or Power PC machines.

AdeptSoft also will incorporate the MindWire client into its AdeptXBBS product.

MARKETLINE

Prices were not available at press time, although \$1,495 for an eight-user license was given as a "ballpark" figure.

AdeptSoft, 8903 Glades Road, Suite L9-199, Boca Raton, FL 33434. (407) 883-0999, fax (407) 483-2480.

BBSs Adept with REXX

Also available from AdeptSoft is Adept-XBBS—formerly shareware now gone commercial—packaged with Adept-REXX.

AdeptXBBS is 32-bit OS/2 bulletin board software with an interface that ordinary users running BBSs can customize without knowledge of C or C++ programming. The Adept-REXX functions give

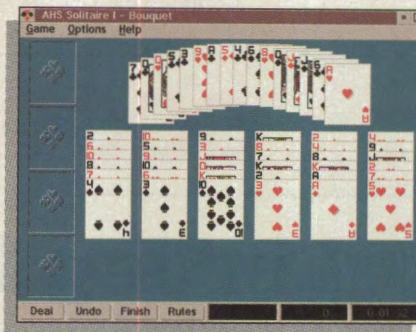
users the ability to "ask" the system for an available node, take it down and use it to dial out or link two modems. Filebase control is also provided.

AdeptXBBS includes support for visual REXX environments. AdeptSoft, 8903 Glades Road, Suite L9-199, Boca Raton, FL 33434. (407) 883-0999, fax (407) 483-2480.

Solitaire-y pursuits

New from Autumn Hill Software is an anthology of 36 solitaire games for OS/2 called AHS Solitaire I.

The package comes with on-line help, scoring and tim-



Autumn Hill Solitaire offers Solitaire for everyone, one at a time.

ing options, 60 different card backs, background textures and sound card support. Price is \$39.95.

Autumn Hill Software Inc., 1145 Ithaca Drive, Boulder, CO 80303. (303) 494-8865, fax (303) 494-7802.

Too clever

New from CleverSoft is a 32-bit automated systems man-

agement product for networked PCs. CleverManage 1.0 manages network and system resources and applications—allowing system administrators to distribute software to machines anywhere in the network with the push of one button.

Besides software distribution, CleverManage automates application metering, inventory and diagnostic functions such as asset management, configuration management and correction and SNMP integration.

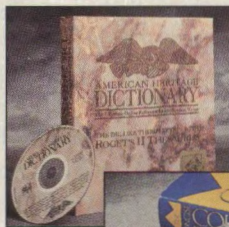
CleverManage supports OS/2 (2.x and higher), Windows for Workgroups and Windows 3.1 and higher. Call the company for pricing.

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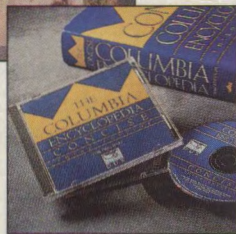


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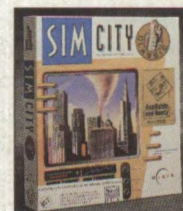
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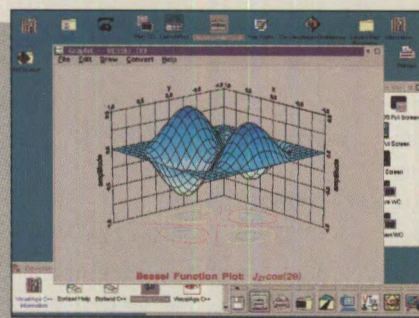
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CleverSoft, Inc., 27 Gorham Road, Suite #1, Scarborough, ME 04074. (207) 883-3550, fax (207) 883-3369. E-mail: 7624-1.2172@compuserve.-com.

Charting new ground

GraphiC 7.1 is now available for OS/2, DOS and Windows from Scientific Endeavors Corp. The new version aims to give scientists and engineers greater control and flexibility in integrating the program's charts, plots and graphs into their own programs.

With the upgrades, GraphiC/OS/2 will remember users' source and destination directories within a session during multiple file conversions. Also, new plots have



Integration of charts, plots and graphs is made easier with GraphiC 7.1.

been added to the GraphiC library: Waterfalls plots make a 3-D plot of a profile taken at numerous fixed intervals and the new Plume Plot lets users display a function of (x,y) at random points without smoothing interpolation.

Price for the OS/2 version is \$495. Scientific Endeavors Corporation, 508 North Ken-

tucky Street, Kingston, TN 37763. (615) 376-4146, fax (615) 376-1571.

Eagle eye

CadSoft Computer this quarter releases an OS/2 version of EAGLE, its printed circuit board (PCB)

design package. Aimed primarily at electronics makers, the software makes up the CAD of CAD/CAM technology.

Version 3.5 of EAGLE on the OS/2 platform will allow the Autorouter and the CAM Processor to run in the background. Both the OS/2 and DOS versions will feature an on-line Forward/Back annotation that transfers any modi-

fication of the schematic immediately to the board, and vice versa.

A new RENUMBER command allows the user to renumber the parts on the board, following a pattern such as left to right or top to bottom. A new programmable output interface allows the export of virtually any kind of data. The hardware key (dongle) that was required to run previous versions has been dropped from EAGLE 3.5. The \$1,197 package comes with Board Layout, Schematic Capture and the Autorouter.

CadSoft Computer, 801 South Federal Highway, Suite 201, Delray Beach, FL 33483-5185. (407) 274-8355, fax (407) 274-8218.

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News

Rhino in the house

As promised, Rhintek has released a scaled-down, less expensive version of its object-oriented OS/2 communications program for the home market. RhinoCom v1.5 Home Edition retains all the standard usability features of its parent product, RhinoCom v1.5 Standard Edition, such as Rhinos, Rhinodexes, an updated tutorial, "Coach" help and a fully configurable Status Box.

It leaves out some of the file transfer protocols, retaining text/binary, XMODEM, ZMODEM and CompuServe

B+. It also dropped the data general and 320 VT terminal emulations, leaving users with ANSI and VT 52 and 100 emulations.

Spokesperson Kristin McCown also said the home edition does not have a host mode for setting up your own BBS. Rhintek has also limited the home product's scripting capabilities and macro key redefining is limited to the function keys.

List price for the Home Edition is \$99 and a RhinoCom Home demo is available from the OS/2 Shareware

Board at (703) 385-0931.

Doing DCE

IBM's OS/2 Warp Distributed Computing Environment (DCE) 2.1, due out first quarter, is IBM's first solo attempt at bringing true open-platform, distributed client/server computing to large numbers of PC LAN users.

Harvey Walseth, of PSP consultant relations, said another fundamental function included in the beta of DCE 2.1 was the Global Directory Service—an alternative to that offered by Novell—that will

allow as many as 10,000 clients to access network resources such as printers, files and objects. Walseth said IBM "has been working really hard to integrate these (DCE) qualities into products," and described large, LAN-ready corporations as a "waiting market" for DCE technology. "But in the long run it goes beyond that," he said. "Separate and different companies will interact within Cell Directory Services (CDS)—trusted 'cell' relationships." Prices for Warp DCE 2.1 were not available at press time. ♦

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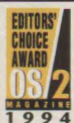
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Minimizing Minimized Dialog Icon Corruption

BY LEN DORFMAN

This tale of many twists started a few months back when I encountered a wonderful MIDI FTP site on the net. As a Baroque music devotee I transferred megabytes of MIDI music to my computer and began playing selections one at a time using OS/2's MMPM MIDI player. This proved unsatisfactory. My dream was to create play lists of my favorite MIDI tunes that could be accessed with a single button click. Once I had the play list cued I could initiate play and minimize the player window. That way I could go on with my writing or programming activities while listening to the music play in the background.

Thus was born—Calliope, the MIDI, AVI and WAV player of my dreams. A labor of love is more worthwhile if you learn something in the process—and even better if you can use your new found knowledge to assist other programmers. When I finally decided to take out my MM programming docs and write this MIDI player, I settled on three people I respect to give periodic feedback as I developed Calliope. Comically, Bryan, Thomas and Mike all expressed powerful opinions that often seemed diametrically opposed. After much deliberation I decided to have a standard PM window appear with one dialog box for the player and another dialog box for play list creation. Simple enough.

As I played with the emerging program it seemed clear that there would be times when the user might want to minimize the player dialog and invoke the play list dialog. Next, the user might minimize the play list dialog and re-display the player dialog. Because these operations could possibly occur in rapid sequence, I thought a minimized dialog icon on the parent window's client area seemed the most elegant approach.

Making a dialog minimize to the parent window's client proves quite simple, requiring two easy programming techniques. The first is to set the **FCF_MINBUTTON** flag in your .DLG file. This will place the minimize button on the Frame's top bar. Listing 1 shows the creation flags for my player dialog.

LISTING 1

```
DIALOG "Calliope Player", /* window title */
    ID_DLG_MAIN,          /* Dialog ID */
    0, 0,                  /* x, y position */
    257, 120+32+8,         /* width, height */
    FS_NOBYTEALIGN
    | WS_MINIMIZED | WS_SAVEBITS,
    FCF_TITLEBAR | FCF_SYSMENU
    | FCF_MINBUTTON
```

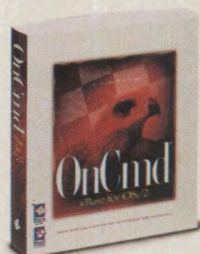
LISTING 2

```
WinDlgBox ( hwndClient, /* minimize to parent */
    hwndFrameP, /* owner handle */
    PlayerProc, /* player proc address */
    NULLHANDLE, /* dialog resource loc */
    ID_DLG_MAIN, /* resource ID */
    NULL ); /* app specific data */
```

LISTING 3

```
case WM_ADJUSTWINDOWPOS:
    if ( ( ( PSWP )mpl )->f1 & SWP_MINIMIZE ) {
        hIcon = WinLoadPointer (HWNDDESKTOP,
                                0, IC_ICON);
        WinSendMsg (hwnd, WM_SETICON,
            MPFROMLONG ( hIcon ), NULL );
        WinShowWindow (WinWindowFromID (
            hwnd, ID_CONTROL ), FALSE );
    }
    else if ( ( ( PSWP )mpl )->f1 & SWP_RESTORE ) {
        WinShowWindow (WinWindowFromID (
            hwnd, ID_CONTROL ), TRUE );
        WinQueryWindowPos ( hwnd, &swp );
    }

    return WinDefDlgProc(hwnd, msg, mpl, mp2);
```

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With the dialog saved in the .DLG file, you invoke the dialog from the program source using the **WinDlgBox(...)** function. The handle of the standard Calliope window is **hwndFrameP** and this standard window's client handle is **hwndClient**. If I had wanted the player dialog to minimize to OS/2's desktop, I would have changed the first parameter of the **WinDlgBox** function from **hwndClient** to **HWND_DESKTOP**. Quite simple and effective. The **WinDlgBox(...)** call that invokes Calliope's Player is illustrated in Listing 2.

I compiled Calliope—no problem. I ran CALLIOPE.EXE—no problem. I invoked the player and began playing a list that included 25 of my favorite Bach pieces. Again, no problem. I clicked once on the Player dialog's minimize button and the Player icon appeared on the client window. *Problem.*

Before my eyes, the upper right corner of the icon was slowly being overwritten. At first I couldn't determine the source of the data that was overwriting the icon, but after a bit of study I theorized that the source was one of the controls from the player dialog. More mysteriously, when I dragged the icon to a new location on the client area the icon returned to its pristine state

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CODE CACHE

until it was dropped. When the icon was dropped on the client area the icon's image was once again overwritten by an offending dialog control.

After a few moments I knew I was in over my head and that my code probably was at fault. When it comes to finding errors, I've always felt a second, third or perhaps even a few hundred pairs of eyes can help. Over the years I've found Internet newsgroups to be wonderful resources for such help—sort of like a virtual version of Carl Jung's collective unconscious. I decided to post my problem on the comp.os.os2.programmer.misc newsgroup and see what transpired. I received two responses to my post.

The first response was a curt reply from an ibm.com E-mail return address. This IBM source stated that dialogs were not designed to be minimized and that I should rethink my decision to use a dialog box for the player (along with a quick fix that should have taken care of the problem). I wanted to send a reply expressing my undying love for dialog boxes and that I was planning to write programs that only used dialogs in the future, but instead I sent a message of appreciation for the response. It's still hard for me to be a good boy.

As I worked the code into calliope.c (discovering coding errors of my own), I received E-mail from a writer and programmer in England. He stated that the minimized dialog icon roach was a well known glitch and provided me with a fix from some public domain code he had used a few years ago. The code in Listing 3 represents the Englishman's fix.

The **WM_ADJUSTWINDOWPOS** message is sent by the **WinSetWindowPos** call to enable the window to adjust to its new position or size. In this case we want the dialog to adjust to being minimized. This bit of code should be placed in your dialog's message processing loop.

In Listing 3, the **((PSWP)mp1)->fl & SWP_MINIMIZE** statement checks for a minimize request. The **hIcon** variable is an **HPOINTER** type and the **IC_ICON** constant is associated with the icon you wish to appear on the desktop. The **WinLoadPointer** and **WinSendMsg** calls load and prepare the icon for display.

The **ID_CONTROL** is the constant associated with the offending control which is overwriting the icon. I made a mistake the first time I used this code. Instead of using the constant asso-

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ciated with the offending control I used the constant associated with the player dialog. Be forewarned.

The **WinShowWindow** call with the last parameter set to false hides the offending control before the dialog is minimized. The ((PSWP)mp1)->fl & SWP_RESTORE statement checks for a restore request. And, finally, the **WinShowWindow** call reveals the previously concealed control.

So, that is how the fix works. And that is the happy end of the Minimizing Minimized Dialog Icon Corruption tale.

At press time, Rev 0.4 of Calliope (a freeware program) was available on the Internet via anonymous ftp at ftp-os2.nmsu.edu. The current archive is named CALLIOPE.ZIP and has been placed in the .../mmedia directory. With it, you can create play lists of your favorite multimedia files, then sit back to watch and listen. Have fun...and if you have any comments or suggestions for future upgrades feel free to send me E-mail at ldorfman@li.net. As time permits I'll be adding new functions to Calliope, my labor of love. ♦

Len Dorfman, Ph.D., is a teacher, writer and periodic programmer who can be reached on the Internet as ldorfman@li.net.

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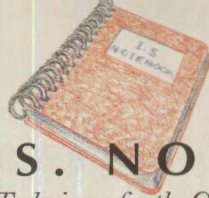
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THE I.S. NOTEBOOK

Tips and Techniques for the OS/2 Professional

Crash-Proof Windows

BY HERB TYSON

General Protection Faults and running out of file handles are just a few of the challenges presented to the WIN-OS/2 user. With proper setup, however, and a little preventive maintenance, you can eliminate most of these problems. This month, we'll take a look at GPFs and file handles to see what you can do to make running Windows safer and easier.

One of the most persistent problems WIN-OS/2 users face is General Protection Faults (GPFs). In fact, sometimes GPFs are so pernicious that once WIN-OS/2 crashes you can't get it restarted. Let's first examine GPFs—what they are, what causes them and how to minimize them.

A GPF occurs when WIN-OS/2 determines that a memory segment has been corrupted. This can happen because one program overwrites memory of another program. It can also happen if virtual memory (i.e., memory swapped to disk) gets corrupted, or if WIN-OS/2 loads the wrong swapped segment back into memory.

In a perfect world of well-managed, protected memory environments, none of this should ever happen. But until then, it happens. It even occurs while using OS/2 programs—that's the reason for some of those SYS3175 error messages you get. Under WIN-OS/2, however, when one program running in a session gets a GPF, the whole session is pretty well *hosed* (technical term meaning that the session is highly susceptible to repeated GPFs). If the WIN-OS/2 session remains open following a GPF, you should take the initiative and close it yourself.

Another reason for GPFs in WIN-OS/2 is resource constraints. WIN-OS/2 expects to have ample system resources and doesn't always check to make sure before using what it

assumes is going to be available. Error handling is done reactively rather than proactively. By the time the program discovers it does not have sufficient resources, it's too late to recover, so WIN-OS/2 notifies you that a GPF occurred and terminates the program. In those WIN-OS/2 sessions that seemingly survive a GPF, a quick check of Windows system resources will usually show that they are seriously low.

There are, however, precautions you can take to try to minimize GPFs. First, make sure that your WIN-OS/2 sessions have enough DPMI (DOS Protected Mode Interface) memory—generally 64MB will suffice. DPMI memory does not get allocated until a program actually tries to use it.

Allocating 64MB ahead of time will not overtax your system; it just ensures that memory-hungry applications like Word 6 for Windows, Excel 5, Access and WordPerfect for Windows have plenty of memory available when and if they need it. Might some lower level, such as 32MB work just as well? Yes, but an optimal minimum is hard to determine, and since DPMI doesn't get allocated until a program actually tries to use it, setting it at a higher level than you're ever likely to need is a safe solution to the problem.

Set a sufficient DPMI level.

- In the WIN-OS/2 Settings notebook, click on the Session tab and then on the WIN-OS/2 settings button.
- Choose DOS memory settings and click OK.
- Choose DPMI_MEMORY_LIMIT and adjust the slider for 64.
- Click Save and close the Settings notebook.

The change will take effect the next time you open that WIN-OS/2 object (you can't change DPMI for a running session).

Limit the number and size of Windows programs running within a session.

The more you run and the more memory they use, the more opportunities there are for any program to step on any other program's memory. Even though the effects are limited to that single WIN-OS/2 session, they can be devastating if the GPF comes before you have saved important work. If you absolutely need two Windows programs running at the same time, you can achieve more stable sessions by setting them to run in separate sessions.

Set a Windows program to run in a separate session.

- Open the Settings notebook for the Windows program and click on the Session tab.
- Under the WIN-OS/2 window option, click to put a check mark by the Separate session option.

The next time you open the program associated with this Settings notebook, a separate WIN-OS/2 environment will be opened for the program.

Depending on the amount of physical RAM installed in your computer as well as the speed of the hard disk on which your SWAPPER.DAT is stored, this option can make performance much slower. However, the likelihood of GPFs is lower, and a GPF in one WIN-OS/2 session won't affect any other sessions.

Monitor the amount of system resources.

When system resources fall below about 40 percent, close and restart the WIN-OS/2 session. To check the amount of system resources, choose "Help, About" from the Program Manager. If the Program Manager isn't running, a number of large Windows programs have other built-in ways to check system resources. For example, in Word 6, choose "Help, About" and click the System Info button. In the System Info display, observe the GDI (graphical display interface) and USER memory areas. When either type of memory falls below 40 percent, Windows applications tend to become unstable and susceptible to GPFs.

A final word needs to be said about GPFs that occur when starting a Windows program, preventing WIN-

OS/2 from starting at all. Common signs are:

- When you double-click to start WIN-OS/2 or a Windows program, there is a brief flurry of activity during which the object icons get hash lines indicating that the program is running, and then the hash lines disappear. No error message is displayed.

- The program starts, but crashes with an immediate GPF.

When the latter happens, especially following a Windows GPF crash, the most frequent cause is the presence of leftover .TMP files whose deletion was prevented because of the crash.

Windows (WIN-OS/2) itself and Windows programs often open a number of temporary files. When and if the session stalls or crashes and has to be closed, some of the open .TMP files don't get deleted. When the program restarts, WIN-OS/2 or the Windows program sometimes tries to reload the

.TMP files it encounters, discovers that they aren't appropriate for the current session and then crashes again. This can cause an unending cycle of crashing when starting a Windows program.

Following a crash, delete all of the leftover .TMP files.

- Check the location stored in the SET TEMP line in your AUTOEXEC.BAT file.
- Depending on which programs were running, .TMP files might be found in other locations as well. You can use the OS/2 system Find command to help find and delete those other files (click mouse button 2 on the Desktop and choose the Find option).
- If WIN-OS/2 is crashing on startup due to leftover .TMP files, then deleting them before starting the WIN-OS/2 session usually restores the ability to run Windows programs.

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One type of system resource to which many of the newer Microsoft programs are especially vulnerable is file handles. Programs using OLE 2 (object linking and embedding) often open a number of temporary files for each file you create. Word 6, for example, opens three or more files for each file you have open. If these files use complex formatting such as embedded graphics or sounds, the number of files can be higher.

The number of files needed is in addition to the large number of files needed by Windows (WIN-OS/2) itself. The need for many file handles often exceeds the default WIN-OS/2 setting of 100, causing a variety of problems, including GPFs and odd messages about the disk being full.

Set DOS_FILES for your WIN-OS/2 session to the highest allowable setting: 255.

- Open the Settings notebook for the WIN-OS/2 program object (click mouse button 2 on the program object and click on Settings).
- Click on the Session tab. Next, click on the WIN-OS/2 settings button, choose the Other DOS Settings category and click OK.
- Click the DOS_FILES setting and observe the value.
- Using the horizontal scroll control, set the value to the maximum, which is 255.
- Click Save and close the Settings notebook.

What does this do for you? For the latest versions of programs such as Excel, Word, Access and WordPerfect for Windows, this means that ample file handles will be available for opening and creating temporary files. If DOS_FILES is set too low when running Word 6, for example, stay alert for red herrings such as "the disk is full" or "write protected" or "failure writing

drive C:." Sometimes, however, especially if Word runs out of files in the middle of an operation, it will inadvertently reload the wrong .TMP file and terminate with a GPF. If you set DOS_FILES to the maximum, then you can be reasonably sure that the problem is not one of running out of file handles. ♦

Herb Tyson is a computer industry analyst and consultant whose clients include IBM. He is the author of several books, including Your OS/2 Warp version 3 Consultant; 10 Minute Guide to OS/2; the Word for Windows 6 Super Book; and the forthcoming Navigating the Internet with OS/2 Warp. He can be reached on the Internet as tyson@cpcug.org.

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Peter G. Magid (Boca Raton, FL) is the User Interface Design Lead for the Workplace Shell and has over 12 years of programming experience at IBM. He is a graduate of Tulane University, and holds a B.S. degree in Computer Science.

Ira H. Schneider (Boca Raton, FL) has focused on enhancements to the Workplace Shell and has over 25 years of experience with IBM. He has held numerous lead programming positions within IBM and graduated from Northeastern University with a B.S. degree in Electrical Engineering.



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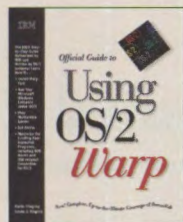
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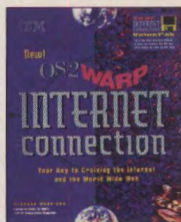
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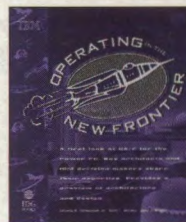


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Deborah Morrison (Raleigh, NC) is an award-winning IBM writer who specializes in TCP/IP and the Internet. She is currently the editor-in-chief of IBM's *TCP/IP Connection* quarterly magazine.



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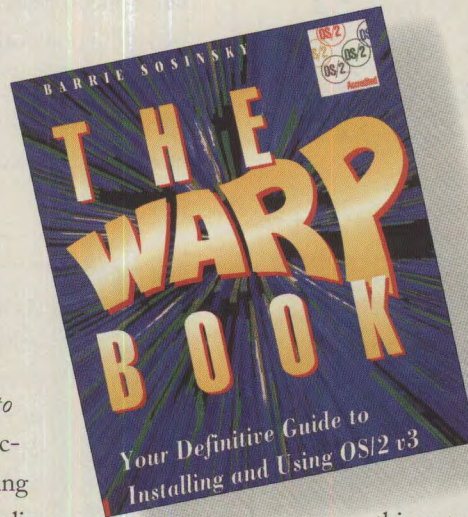
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REVIEWED BY GENE STEELE

As an avid consumer of all things OS/2, I read a lot of OS/2 books: little books, big books, even scary books like the *OS/2 LAN Server Engineer Certification* tome I bought the other day. It is not often, however, that I find a book about OS/2 to be fun to read. Barrie Sosinsky's *The Warp Book* is an enjoyable exception.

The Warp Book: Your Definitive Guide to Installing and Using OS/2 v3 is a fine introduction to installing, tuning, customizing and using OS/2 Warp and all of the Warp BonusPak applications. But it is also more than that. Barrie brings to this work his perspectives and biases as a former Macintosh owner, professional writer and a graphics and database developer under Macintosh and Windows. His excitement over OS/2 is engaging and he has infused this helpful guide with his experiences, anecdotes, tips and notes. He makes a few assertions with which some of us might argue, yet he manages to illustrate many of the issues and comparisons to be made (and fought over) between Warp, Windows and Windows NT.

Though I did not find some of my favorite Stupid OS/2 Tricks, like how to do high resolution 256 color icons, I did find all the basics as



well as a few things I didn't know about some of the BonusPak applications. Of course, considering the lack of documentation for Warp's BonusPak, this should not be too surprising. Barrie does particular justice to this package of software as he explores all of the features of each program.

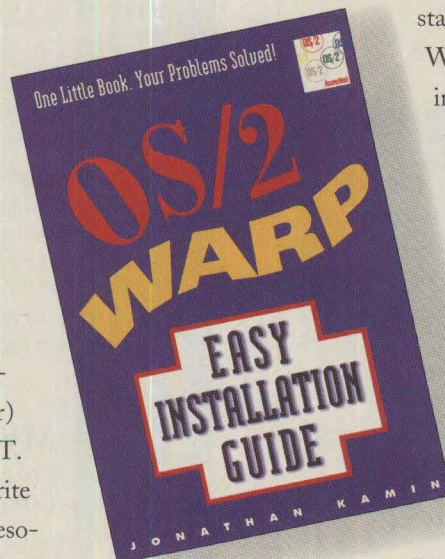
Once again, some of the fancier tricks are missing, but one of the joys of Warp is its depth of function. The Warped can always find cool new

things to do with their operating system.

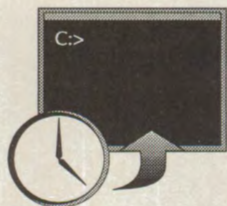
Overall, *The Warp Book* is a concise, easy to understand guide to the functions and features of OS/2 Warp and the BonusPak applications. It provides interesting commentary and insight on many of the considerations affecting the choice and use of an OS today. Novice OS/2 users will find it helpful and informative. The more experienced OS/2-faithful will appreciate the book's structure, which allows easy access to areas of interest for in-depth exploration.

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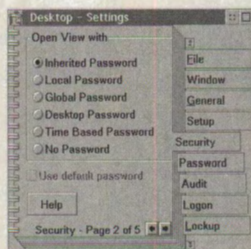
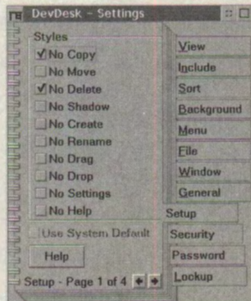
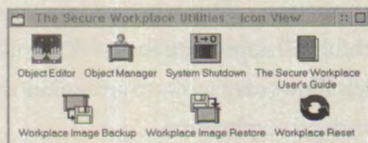
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BOOKSTAX

page book by Jonathan Kamin goes a long way toward filling many of the potholes that meet the innocent user on the road to operating system bliss.

In the Preface, Kamin tells us that according to statistics, three out of five OS/2 Warp installations go without a hitch. This book is for the other 40 percent. In the hundreds of OS/2 installations I have performed as a Team OS/2 member and Certified OS/2 Engineer, I have come across many of the problems documented in this little guide. If I had this book then, I'd probably have more hair now. I wish this book, or one like it, were included with Warp. It would go a long way toward improving the above statistic.

Many of the problems for which Kamin details fixes are, in fact, being incorporated into Fix Packs from IBM, but this will not make the book obsolete. *The OS/2 Warp Easy Installation Guide* is more than just a catalog of OS/2 fixes. It shows you what to expect, where to look for and how to troubleshoot common OS/2 installation problems.

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BOOKSTAX

Kamin's book contains strategies and factors to consider when planning your installation, detailed troubleshooting information and tips and even a step-by-step guide through an ideal installation session. He documents nicely such hardware issues as IRQ conflicts, normal addresses and defaults, partitioning and where and how to find the information you need. You will also find help with hardware incompatibilities, traps and error messages and descriptions of how Warp changes Windows.

The Warp Book and the *OS/2 Warp Easy Installation Guide* definitely join my short list of recommended reading for the about to be, or recently, Warped. The two works complement each other nicely. While *The Warp Book* helps you get the full benefit of Warp and its included BonusPak applications, the *OS/2 Warp Easy Installation Guide* gets you up and running. ♦

Gene Steele is a former IBM designer and inventor. Presently, he is contracting as a certified OS/2 engineer at IBM in San Jose, California. He can be reached at Steele@netcom.com.

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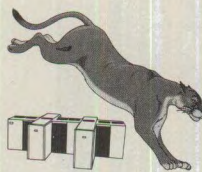
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OS/2 and Win95 Find Common Ground

BY JERRY POURNELLE

Installers have traditionally been like the drama director for the opera company: you have to have one, but it's almost an afterthought. Installers tend to work barely well enough to get the product out the door, and when product improvements are planned the installer gets lowest priority. This is foolish because bad installers cost money. A great deal of technical support costs accumulate during installation. Better installers would mean fewer calls to tech support. Tech support people cost money—sometimes a lot of money. Yet for some reason installers continue to be neglected.

Case in point: the OS/2 installation system was notorious from the beginning—remember the infamous “bad or missing country.sys”? Nearly all my OS/2 problems have been with installation and most have been fixed through editing CONFIG.SYS and other initialization files. If I have these problems, so do paying customers.

The Windows 95 installer isn't quite that bad, but it has one horrible flaw: if you've been running Win95 beta code, the upgrade installer isn't smart enough to go in and clean up with fire and sword. Long after I installed the gold build of Win95 I was experiencing mysterious glitches. Finally, in desperation, I deleted the Windows directory and all of its subdirectories and installed from scratch. That fixed them—just about all of the problems—but a better installer would have made it unnecessary.

Windows 95 has other flaws. For example, the “Network Neighborhood” is able to look across the net and see Valiant, the Value Point OS/2 system, but when I tell the Win95 Printer Installer that I want printing to go over the net to the HP LaserJet attached to Valiant, the printer installer can't see Valiant at all. I was able to make the attachment by typing in \\valiant\hplaserj, but I sure couldn't point and click.

If I were in a cruel mood I'd ask Microsoft which was the actual error: that the printer installer can't see an OS/2 Warp Connect

machine or that the Network Neighborhood application *can* see it?

One last thing. We're experiencing memory fragmentation in Windows 95. Take a Pentium with 32MB of memory and open Photoshop or some other really big application that needs lots of memory. Fool around with it for a while, and close it down. Now use a memory tool and see how much memory you have. It won't be what you started with and each time you load and close down an application you may lose just a bit more memory. Restarting Windows 95 will recover the memory, but that's pretty drastic.

Some, much, or perhaps all of the problem here is bad applications that don't have proper object destructors built into them. The real question is whether Win95 encourages or discourages good habits in applications programmers.

On that score, Microsoft recently held a Win95 Developers' road show. It cost \$50 to attend, but you got lunch. It was a major effort with simulcast from Redmond, a lot of media vision materials and a number of technical experts to answer questions. They also showed Microsoft Office for Win95. Did you know there are more than five million Access users?

With one exception, all components of the Microsoft Office suite use Microsoft Visual Basic as a macro language. The exception is Word, which still uses Word Basic, but they're going to beat that into submission pretty soon so that developers will have only one macro language to think about.

About 500 software developers attended the Microsoft show. As it happens, IBM held a similar show at nearly the same time. It too had tech experts and some top flight IBM people, and it was free, including the lunch. About 200 attended the IBM show. I hope that's not an omen. ♦

What do you do with OS/2 that you can't do with Win95? Let me know. Send mail to jerry@bix.com.



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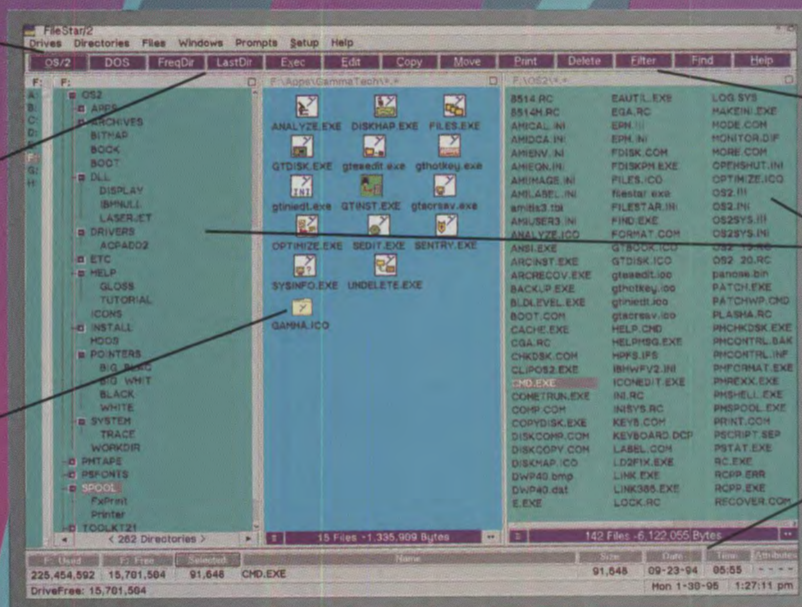
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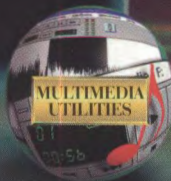
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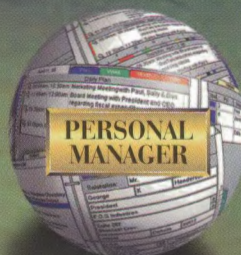
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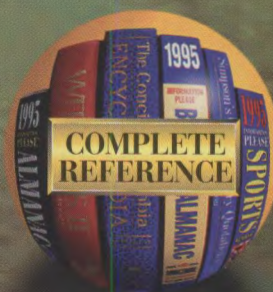


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